FOR OFFICIAL USE ONLY

311173 ACCESS DB #

PLEASE PRINT CLEARLY

RECEIVED

OCT 13 2009

TECH CENTER 1600/2900

Scientific and Technical Information Center

SEARCH REQUEST FORM

Requester's Full Name: Yong Chong Examiner #: Date: 10/13/09

Art Unit: 1627 Phone Number: 2-8513 Serial Number: 10/572,933

Location (Bldg/Room#): 3D59 (Mailbox #): 4816 Results Format Preferred (circle): PAPER DISK

****

To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

Title of Invention:

Inventors (please provide full names):

Earliest Priority Date:

Search Topic:

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known.

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

* Please search the full scope of claim 18 only!

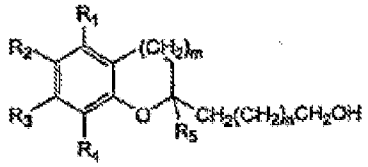
18

Attachment B

In the Claims:

1-17 (cancelled)

18) (new) A compound of the general Formula (I):



(I)

wherein

- R_1, R_2, R_3 and R_4, identical or different, represent a hydrogen atom, a hydroxyl group, a linear or branched (C_1-C_6) alkyl group, a linear or branched (C_1-C_6) alkoxy group, a linear or branched (C_1-C_6) carboxylate group,
- R_5 represents a hydrogen atom or a linear or branched (C_1-C_6) alkyl group,
- m is an integer between 1 and 2, and
- n is an integer between 8 and 20.

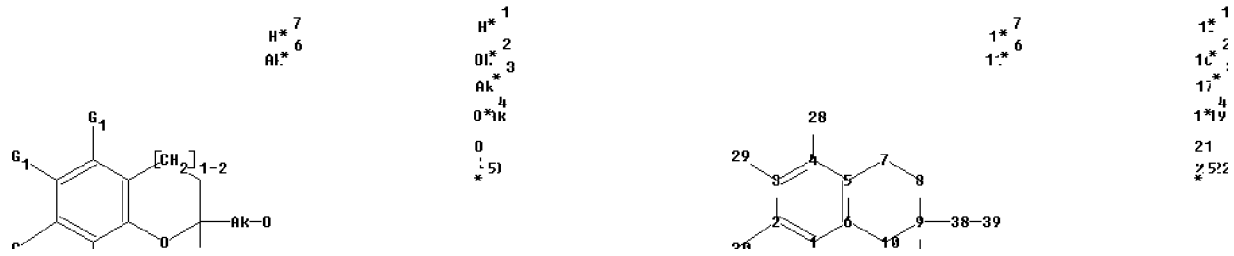
19. (new) The compound according to Claim 18, wherein n is an integer between 8 and 16.

20. (new) The compound according to Claim 19, wherein n is an integer equal to 8, 10, 12, 13, 14 or 16.

21. (new) The compound according to Claim 18, wherein the compound is a compound selected from TFA12, TFA14, TFA15, TFA16 and TFA18.

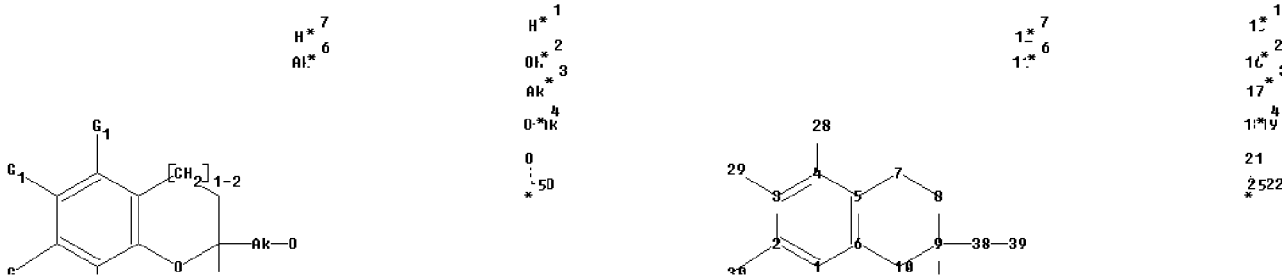
STRUCTURE SEARCH

```
=> FILE REG
Uploading 1LA.str
```



```
chain nodes :
11  12  15  16  17  18  19  20  21  22  28  29  30  31  32  38  39
ring nodes :
1  2  3  4  5  6  7  8  9  10
chain bonds :
1-31  2-30  3-29  4-28  9-32  9-38  18-19  20-21  20-22  38-39
ring bonds :
1-2  1-6  2-3  3-4  4-5  5-6  5-7  6-10  7-8  8-9  9-10
exact/norm bonds :
1-31  2-30  3-29  4-28  5-6  5-7  6-10  7-8  8-9  9-10  9-32  9-38  18-19  20-21
20-22  38-39
normalized bonds :
1-2  1-6  2-3  3-4  4-5


G1:[*1],[*2],[*3],[*4],[*5]

G2:[*6],[*7]

Match level :
1:Atom  2:Atom  3:Atom  4:Atom  5:Atom  6:Atom  7:Atom  8:Atom  9:Atom  10:Atom
11:CLASS  12:CLASS  15:CLASS  16:CLASS  17:CLASS  18:CLASS  19:CLASS  20:CLASS  21:CLASS
22:CLASS
28:CLASS  29:CLASS  30:CLASS  31:CLASS  32:CLASS  38:CLASS  39:CLASS
```

Uploading 12LA.str



chain nodes :
11 12 15 16 17 18 19 20 21 22 28 29 30 31 32 38 39
ring nodes :
1 2 3 4 5 6 7 8 9 10
chain bonds :
1-31 2-30 3-29 4-28 9-32 9-38 18-19 20-21 20-22 38-39
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 8-9 9-10
exact/norm bonds :
1-31 2-30 3-29 4-28 5-6 5-7 6-10 7-8 8-9 9-10 9-32 9-38 18-19 20-21
20-22
exact bonds :
38-39
normalized bonds :
1-2 1-6 2-3 3-4 4-5

G1:[*1],[*2],[*3],[*4],[*5]

G2:[*6],[*7]

Connectivity :
38:2 E exact RC ring/chain
Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:CLASS 12:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS 21:CLASS
22:CLASS
28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS 38:CLASS 39:CLASS
Generic attributes :

38:
Saturation : Saturated

Element Count :
Node 38: Limited
C,C6

FILE 'REGISTRY' ENTERED AT 11:40:19 ON 16 OCT 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2009 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 15 OCT 2009 HIGHEST RN 1188475-73-1
DICTIONARY FILE UPDATES: 15 OCT 2009 HIGHEST RN 1188475-73-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 26, 2009.

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=> FILE ZCAPLUS
FILE 'ZCAPLUS' ENTERED AT 11:40:23 ON 16 OCT 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is
held by the publishers listed in the PUBLISHER (PB) field (available
for records published or updated in Chemical Abstracts after December
26, 1996), unless otherwise indicated in the original publications.
The CA Lexicon is the copyrighted intellectual property of the
American Chemical Society and is provided to assist you in searching
databases on STN. Any dissemination, distribution, copying, or storing
of this information, without the prior written consent of CAS is
strictly prohibited.

FILE COVERS 1907 - 16 Oct 2009 VOL 151 ISS 17
FILE LAST UPDATED: 15 Oct 2009 (20091015/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2009

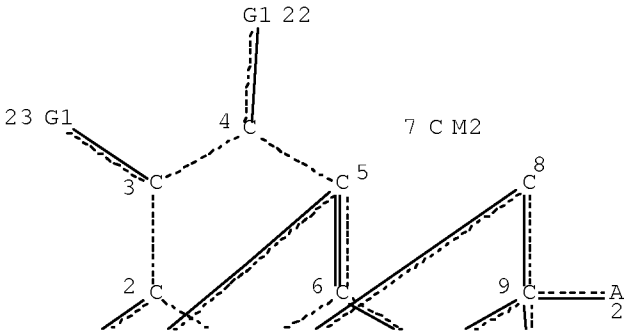
ZCAplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2009.

CAS Information Use Policies apply and are available at:

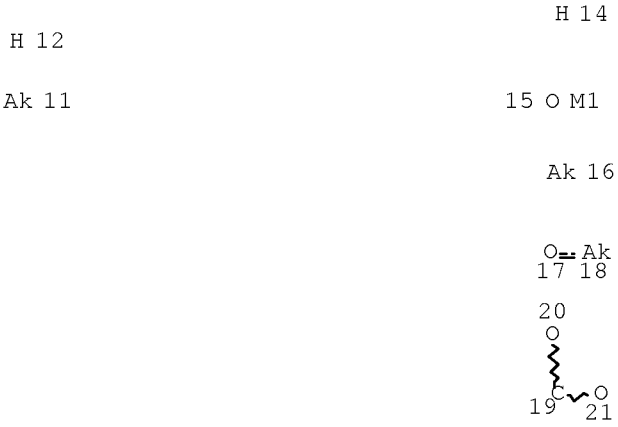
http://www.cas.org/legal/infopolicy.html

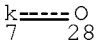
This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D STAT QUE L15
L1 STR

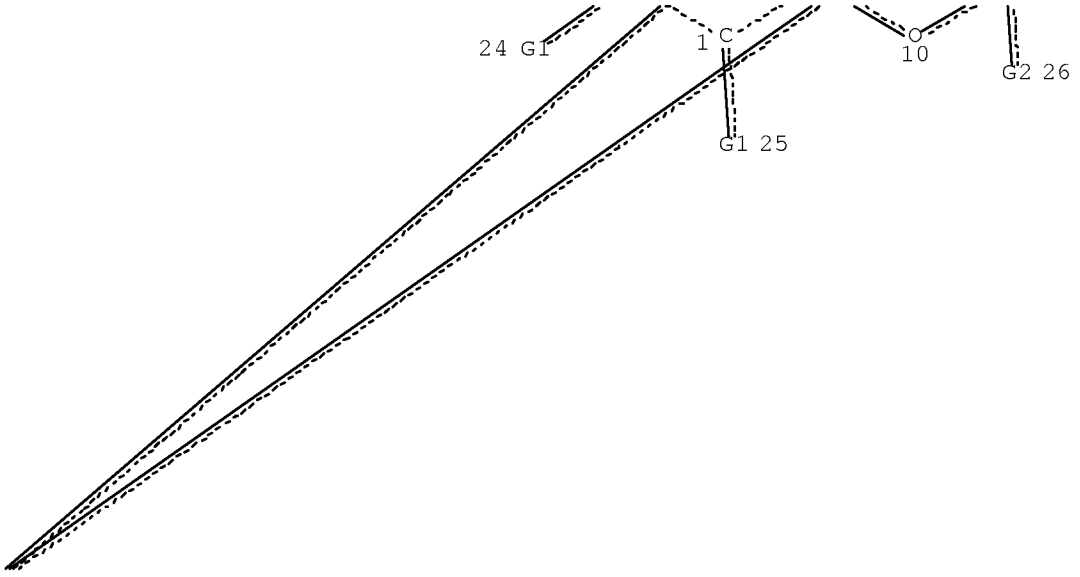


Page 1-A





Page 1-B



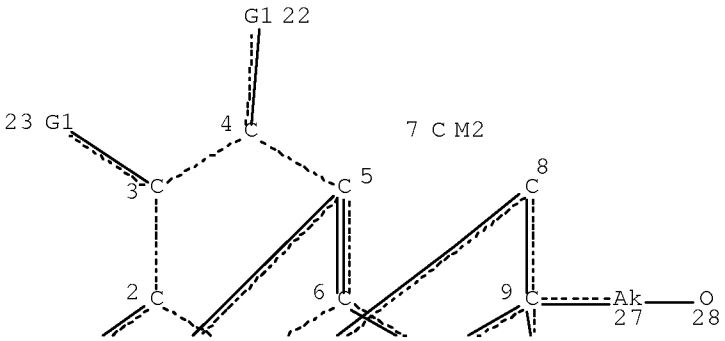
Page 2-A


```
Page 3-A
VAR G1=14/15/16/17/19
VAR G2=11/12
REP G20=(1-2) 7-5 7-8
NODE ATTRIBUTES:
HCOUNT  IS M2     AT   7
HCOUNT  IS M1     AT  15
NSPEC   IS R      AT   1
NSPEC   IS R      AT   2
NSPEC   IS R      AT   3
NSPEC   IS R      AT   4
NSPEC   IS R      AT   5
NSPEC   IS R      AT   6
NSPEC   IS R      AT   7
NSPEC   IS R      AT   8
NSPEC   IS R      AT   9
NSPEC   IS R      AT  10
NSPEC   IS C      AT  11
NSPEC   IS C      AT  12
NSPEC   IS R      AT  13
NSPEC   IS C      AT  14
NSPEC   IS C      AT  15
NSPEC   IS C      AT  16
NSPEC   IS C      AT  17
NSPEC   IS C      AT  18
NSPEC   IS C      AT  19
NSPEC   IS C      AT  20
NSPEC   IS C      AT  21
```

```
NSPEC   IS C      AT  22
NSPEC   IS C      AT  23
NSPEC   IS C      AT  24
NSPEC   IS C      AT  25
NSPEC   IS C      AT  26
NSPEC   IS C      AT  27
NSPEC   IS C      AT  28
DEFAULT MLEVEL IS ATOM
MLEVEL  IS CLASS  AT  11 12 14 15 16 17 18 19 20 21 27 28
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  28

STEREO ATTRIBUTES: NONE
L2         5131 SEA FILE=REGISTRY SSS FUL L1
L12             STR
```

H 12

Ak 11

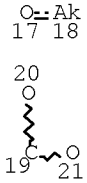


Page 1-A

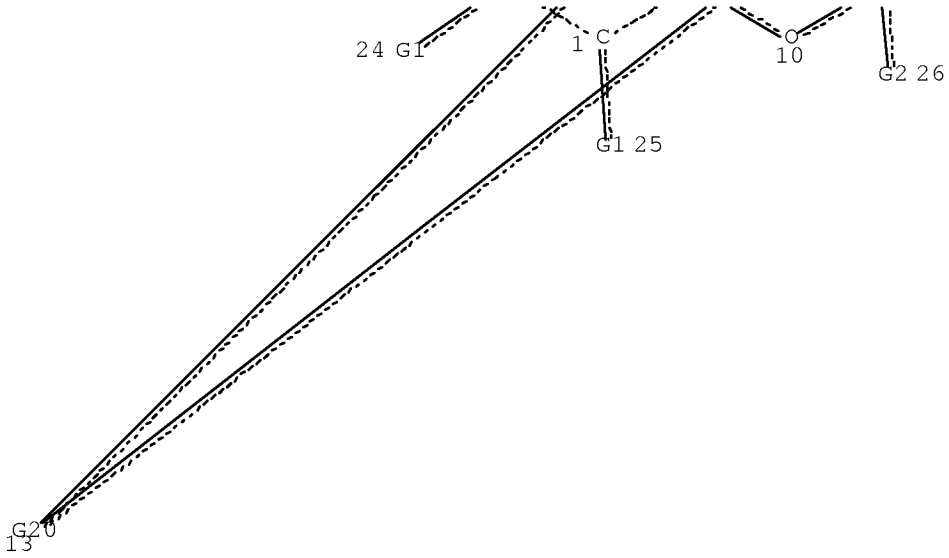
H 14

15 O M1

Ak 16



Page 1-B



Page 2-A

```
VAR G1=14/15/16/17/19
VAR G2=11/12
REP G20=(1-2) 7-5 7-8
NODE ATTRIBUTES:
HCOUNT  IS M2     AT   7
HCOUNT  IS M1     AT  15
NSPEC   IS R      AT   1
NSPEC   IS R      AT   2
NSPEC   IS R      AT   3
NSPEC   IS R      AT   4
NSPEC   IS R      AT   5
NSPEC   IS R      AT   6
NSPEC   IS R      AT   7
NSPEC   IS R      AT   8
NSPEC   IS R      AT   9
NSPEC   IS R      AT  10
NSPEC   IS C      AT  11
NSPEC   IS C      AT  12
NSPEC   IS R      AT  13
NSPEC   IS C      AT  14
NSPEC   IS C      AT  15
NSPEC   IS C      AT  16
NSPEC   IS C      AT  17
NSPEC   IS C      AT  18
NSPEC   IS C      AT  19
NSPEC   IS C      AT  20
NSPEC   IS C      AT  21
NSPEC   IS C      AT  22
NSPEC   IS C      AT  23
NSPEC   IS C      AT  24
NSPEC   IS C      AT  25
NSPEC   IS C      AT  26
NSPEC   IS C      AT  27
NSPEC   IS C      AT  28
CONNECT IS E2  RC AT  27
```

DEFAULT MLEVEL IS ATOM
MLEVEL IS CLASS AT 11 12 14 15 16 17 18 19 20 21 27 28
GGCAT IS SAT AT 27
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M6 C AT 27

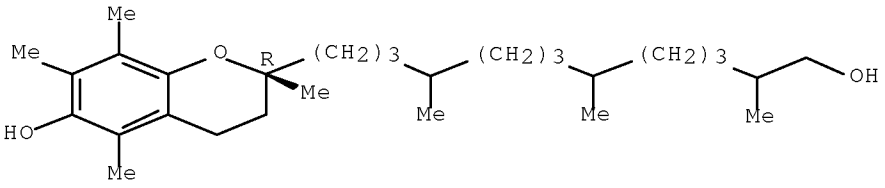
GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 28

STEREO ATTRIBUTES: NONE
L14 91 SEA FILE=REGISTRY SUB=L2 SSS FUL L12
L15 37 SEA FILE=ZCAPLUS SPE=ON ABB=ON PLU=ON L14

=> D L15 IBIB ABS HITSTR 1-37

L15 ANSWER 1 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2009:534025 ZCAPLUS Full-text
DOCUMENT NUMBER: 151:56639
TITLE: Configuration of the vitamin E analogue garcinoic acid extracted from Garcinia kola seeds
AUTHOR(S): Mazzini, Francesco; Betti, Michele; Netscher, Thomas; Galli, Francesco; Salvadori, Piero
CORPORATE SOURCE: Dipartimento di Chimica e Chimica Industriale, Universita di Pisa, Pisa, 56126, Italy
SOURCE: Chirality (2009), 21(5), 519-524
CODEN: CHRLEP; ISSN: 0899-0042
PUBLISHER: Wiley-Liss, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Vitamin E derivs. bearing a carboxylic group have recently gained great attention because of their antitumoral properties. Garcinoic acid (trans-13'-carboxy-δ-tocotrienol) is a vitamin E analog extracted from Garcinia kola seeds in which the carboxylic group is at the end of the aliphatic side chain and reported to be a racemate based on the optical rotation measurements. However, CD determination of a sample of the acid analyzed by the authors gave a pos. peak at 208 nm, indicating that it is not a racemate. To assess the enantiomeric composition of garcinoic acid, it was thus transformed to α-tocopherol and analyzed by chiral HPLC on column OD-H. On the basis of the elution order of α-tocopherol stereoisomers, the garcinoic acid sample resulted to be enantiopure with R configuration at carbon 2 of the chroman ring. Moreover, in a preliminary test, the acid and some of its derivs. showed a marked antiproliferative effect on glioma C6 cancer cells. Chirality, 2009. .COPYRGT. 2008 Wiley-Liss, Inc.
IT 1160974-39-9P
RL: PAC (Pharmacological activity); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(configuration of the vitamin E analog garcinoic acid extracted from Garcinia kola seeds and antiproliferative effect on glioma)
RN 1160974-39-9 ZCAPLUS
CN 2H-1-Benzopyran-2-tridecanol, 3,4-dihydro-6-hydroxy(-β,ζ,κ,2,5,7,8-heptamethyl)-, (2R)- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 2 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2009:384603 ZCAPLUS Full-text
DOCUMENT NUMBER: 150:366952
TITLE: Use of tocopherol derivatives as inhibitors of the notch signalling pathway
INVENTOR(S): Baron-Van Evercooren, Anne; Nait Oumesmar, Brahim
PATENT ASSIGNEE(S): INSERM (Institut National de la Sante et de la Recherche Medicale), Fr.
SOURCE: PCT Int. Appl., 44pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2009040423	A1	20090402	WO 2008-EP62953	20080926
W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
EP 2042172	A1	20090401	EP 2007-301397	20070926
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, RS				

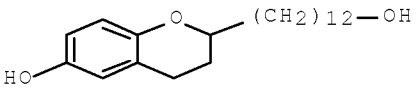
PRIORITY APPLN. INFO.: EP 2007-301397 A 20070926
OTHER SOURCE(S): MARPAT 150:366952

AB The invention relates to the use of tocopherol derivs. as inhibitors of the Notch signaling pathway. More particularly, the invention relates to the use of tocopherol derivs. for the treatment of a disease associated with an up-regulated Notch signaling pathway activity.

IT 1137539-18-4
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(use of tocopherol derivs. as inhibitors of Notch signalling pathway for disease treatment)

RN 1137539-18-4 ZCAPLUS

CN 2H-1-Benzopyran-2-dodecanol, 3,4-dihydro-6-hydroxy- (CA INDEX NAME)



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 3 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2009:382908 ZCAPLUS Full-text
DOCUMENT NUMBER: 150:366949
TITLE: Use of tocopherol derivatives as inhibitors of the Notch signaling pathway
INVENTOR(S): Baron-van- Evercooren, Anne; Nait Oumesmar, Brahim
PATENT ASSIGNEE(S): Institut National de la Sante et de la Recherche Medicale (INSERM), Fr.
SOURCE: Eur. Pat. Appl., 23pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

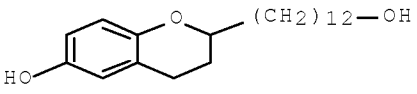
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 2042172	A1	20090401	EP 2007-301397	20070926
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, RS				
WO 2009040423	A1	20090402	WO 2008-EP62953	20080926
W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

PRIORITY APPLN. INFO.: EP 2007-301397 A 20070926
OTHER SOURCE(S): MARPAT 150:366949

AB The invention relates to the use of tocopherol derivs. as inhibitors of the Notch signaling pathway. More particularly, the invention relates to the use of tocopherol derivs. for the treatment of a disease associated with an up-regulated Notch signaling pathway activity.

IT 1137539-18-4
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(use of tocopherol derivs. as inhibitors of Notch signalling pathway for disease treatment)
RN 1137539-18-4 ZCAPLUS

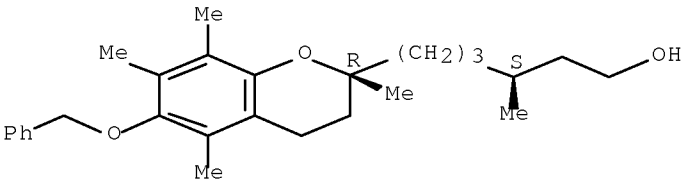
CN 2H-1-Benzopyran-2-dodecanol, 3,4-dihydro-6-hydroxy- (CA INDEX NAME)



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 4 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2008:1383623 ZCAPLUS Full-text
DOCUMENT NUMBER: 149:555118
TITLE: Reductions by metal alkoxyaluminum hydrides. Part II. Carboxylic acids and derivatives, nitrogen compounds, and sulfur compounds
AUTHOR(S): Malek, Jaroslav
CORPORATE SOURCE: Czech. Acad. Sci., Prague, Czech.
SOURCE: Organic Reactions (Hoboken, NJ, United States) (1988), 36, No pp. given
CODEN: ORHNBA
URL: http://www3.interscience.wiley.com/cgi-bin/mrwhome/107610747/HOME
PUBLISHER: John Wiley & Sons, Inc.
DOCUMENT TYPE: Journal; General Review; (online computer file)
LANGUAGE: English
OTHER SOURCE(S): CASREACT 149:555118
AB A review of the article Redns. by metal alkoxyaluminum hydrides. Part II. Carboxylic acids and derivs., nitrogen compds., and sulfur compds.
IT 64705-01-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(Redns. by Metal Alkoxyaluminum Hydrides. Part II. Carboxylic Acids and Derivs., Nitrogen Compds., and Sulfur Compds.)
RN 64705-01-7 ZCAPLUS
CN 2H-1-Benzopyran-2-hexanol, 3,4-dihydro-γ,2,5,7,8-pentamethyl-6-(phenylmethoxy)-, (γS,2R)- (CA INDEX NAME)

Absolute stereochemistry.



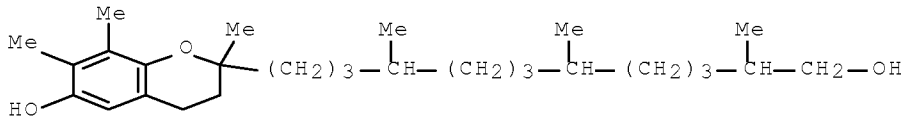
L15 ANSWER 5 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2007:563086 ZCAPLUS Full-text
DOCUMENT NUMBER: 148:162969
TITLE: Identification and quantitation of novel vitamin E metabolites, sulfated long-chain carboxychromanols, in human A549 cells and in rats
AUTHOR(S): Jiang, Qing; Freiser, Helene; Wood, Karl V.; Yin,

Xinmin
CORPORATE SOURCE: Interdepartmental Nutrition Program, Purdue University, West Lafayette, IN, 47907, USA
SOURCE: Journal of Lipid Research (2007), 48(5), 1221-1230
CODEN: JLPRAW; ISSN: 0022-2275
PUBLISHER: American Society for Biochemistry and Molecular Biology, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The metabolism of vitamin E involves oxidation of the phytyl chain to generate the terminal metabolite 7,8-dimethyl-2-(β-carboxyethyl)-6- hydroxychroman (CEHC) via intermediate formation of 13'-hydroxychromanol and longchain carboxychromanols. Conjugated (including sulfated) metabolites were reported previously but were limited to CEHCs. Here, using electrospray and inductively coupled plasma mass spectrometry, the authors discovered that γ-tocopherol (γ-T) and δ-T were metabolized to sulfated 9'-, 11'-, and 13'-carboxychromanol (9'S, 11'S, and 13'S) in human A549 cells. To further study the metabolites, the authors developed a HPLC assay with fluorescence detection that simultaneously analyzes sulfated and nonconjugated intermediate metabolites. Using this assay, the authors found that sulfated metabolites were converted to nonconjugated carboxychromanols by sulfatase digestion. In cultured cells, .apprx.45% long-chain carboxychromanols from γ-T but only 10% from δ-T were sulfated. Upon supplementation with γ-T, rats had increased tissue levels of 9'S, 11'S, and 13'S, 13'-hydroxychromanol, 13'-carboxychromanol, and γ-CEHC. The plasma concns. of combined sulfated long-chain metabolites were comparable to or exceeded those of CEHCs and increased proportionally with the supplement dosages of γ-T. The authors' study identifies sulfated long-chain carboxychromanols as novel vitamin E metabolites and provides evidence that sulfation may occur parallel with β-oxidation In addition, the HPLC fluorescence assay is a useful tool for the investigation of vitamin E metabolism

IT 1002112-56-2
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(identification and quantitation of novel vitamin E metabolites, sulfated long-chain carboxychromanols, in human A549 cells and in rats)

RN 1002112-56-2 ZCAPLUS
CN 2H-1-Benzopyran-2-tridecanol, 3,4-dihydro-6-hydroxy-β,ζ,κ,2,7,8-hexamethyl- (CA INDEX NAME)



OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)
REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

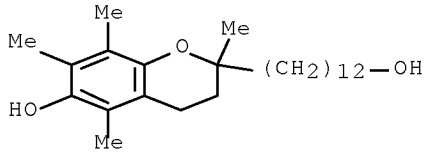
L15 ANSWER 6 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2006:1189879 ZCAPLUS Full-text
DOCUMENT NUMBER: 146:142846
TITLE: Improved synthesis of tocopherol fatty alcohols and analogs: microglial activation modulators
AUTHOR(S): Muller, Thierry; Coowar, Djalil; Hanbali, Mazen; Heuschling, Paul; Luu, Bang

CORPORATE SOURCE: Laboratoire de Chimie Organique des Substances Naturelles, Centre de Neurochimie, UMR 7177-LC3 CNRS, Universite Louis Pasteur, Strasbourg, 67084, Fr.
SOURCE: Tetrahedron (2006), 62(51), 12025-12040
CODEN: TETRAB; ISSN: 0040-4020
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 146:142846

AB The synthesis of tocopherol fatty alcs. (TFAs), potent microglial activation modulators, was achieved via C-alkylation of trimethylhydroquinone. Several analogs, in particular water-soluble prodrugs, have been synthesized using a Wittig reaction and their antioxidant activities have been evaluated.

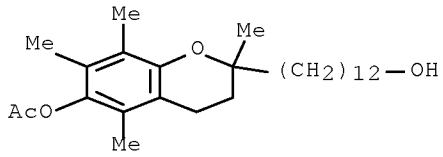
IT 824404-29-7P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(preparation of tocopherol fatty alcs. and analogs and the antioxidant activity of the prepared water-soluble prodrugs)

RN 824404-29-7 ZCAPLUS
CN 2H-1-Benzopyran-2-dodecanol, 3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl- (CA INDEX NAME)

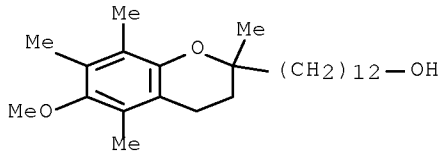


IT 918876-37-6P 918876-41-2P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of tocopherol fatty alcs. and analogs and the antioxidant activity of the prepared water-soluble prodrugs)

RN 918876-37-6 ZCAPLUS
CN 2H-1-Benzopyran-2-dodecanol, 6-(acetyloxy)-3,4-dihydro-2,5,7,8-tetramethyl- (CA INDEX NAME)

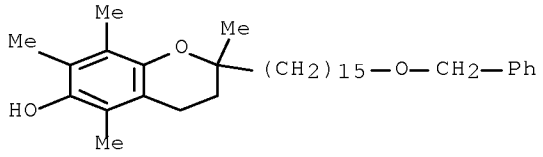


RN 918876-41-2 ZCAPLUS
CN 2H-1-Benzopyran-2-dodecanol, 3,4-dihydro-6-methoxy-2,5,7,8-tetramethyl- (CA INDEX NAME)

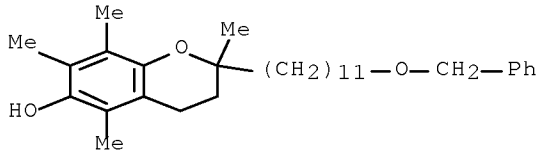


IT 848814-61-9P 918876-01-4P 918876-03-6P
918876-11-6P 918876-12-7P 918876-14-9P
918876-25-2P 918876-26-3P 918876-27-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of tocopherol fatty alcs. and analogs and the antioxidant activity of the prepared water-soluble prodrugs)

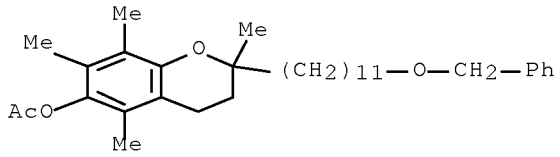
RN 848814-61-9 ZCAPLUS
CN 2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-[15-(phenylmethoxy)pentadecyl]- (CA INDEX NAME)



RN 918876-01-4 ZCAPLUS
CN 2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-[11-(phenylmethoxy)undecyl]- (CA INDEX NAME)

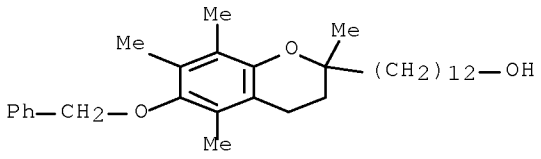


RN 918876-03-6 ZCAPLUS
CN 2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-[11-(phenylmethoxy)undecyl]-, 6-acetate (CA INDEX NAME)



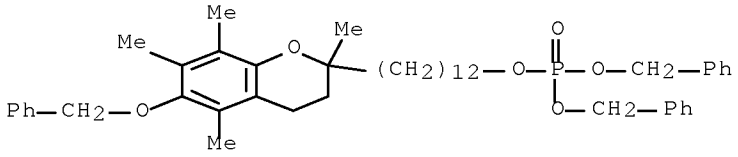
RN 918876-11-6 ZCAPLUS

CN 2H-1-Benzopyran-2-dodecanol, 3,4-dihydro-2,5,7,8-tetramethyl-6-(phenylmethoxy)- (CA INDEX NAME)



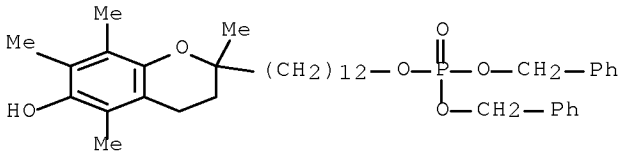
RN 918876-12-7 ZCAPLUS

CN Phosphoric acid, 12-[3,4-dihydro-2,5,7,8-tetramethyl-6-(phenylmethoxy)-2H-1-benzopyran-2-yl]dodecyl bis(phenylmethyl) ester (CA INDEX NAME)



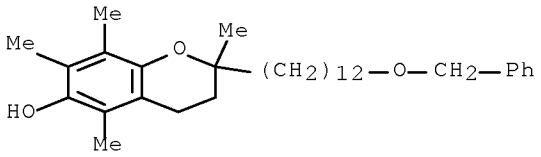
RN 918876-14-9 ZCAPLUS

CN Phosphoric acid, 12-(3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl-2H-1-benzopyran-2-yl)dodecyl bis(phenylmethyl) ester (CA INDEX NAME)



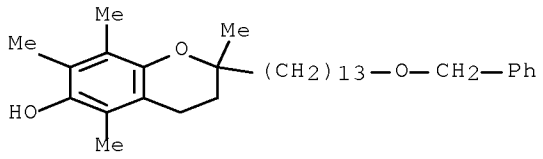
RN 918876-25-2 ZCAPLUS

CN 2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-[12-(phenylmethoxy)dodecyl]- (CA INDEX NAME)

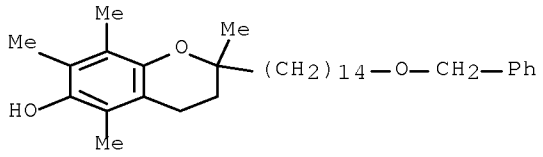


RN 918876-26-3 ZCAPLUS

CN 2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-[13-(phenylmethoxy)tridecyl]- (CA INDEX NAME)

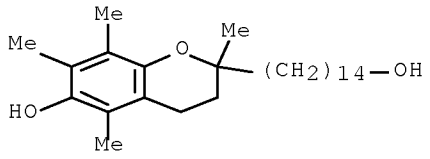


RN 918876-27-4 ZCAPLUS
CN 2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-[14-(phenylmethoxy)tetradecyl]- (CA INDEX NAME)

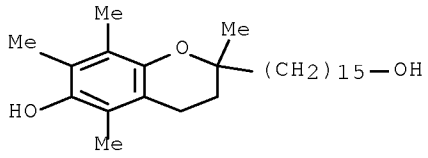


IT 824404-30-0P 848814-62-0P 918876-02-5P
918876-04-7P 918876-05-8P 918876-06-9P
918876-10-5P 918876-13-8P 918876-28-5P
918876-29-6P 918876-30-9P 918876-31-0P
918876-32-1P 918876-33-2P 918876-34-3P
918876-35-4P 918876-36-5P 918876-38-7P
918876-39-8P 918876-40-1P 918876-42-3P
918876-43-4P 918876-44-5P 918876-46-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of tocopherol fatty alcs. and analogs and the antioxidant activity of the prepared water-soluble prodrugs)

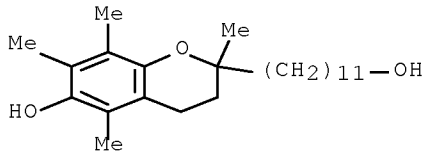
RN 824404-30-0 ZCAPLUS
CN 2H-1-Benzopyran-2-tetradecanol, 3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl- (CA INDEX NAME)



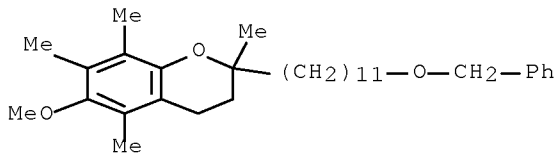
RN 848814-62-0 ZCAPLUS
CN 2H-1-Benzopyran-2-pentadecanol, 3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl- (CA INDEX NAME)



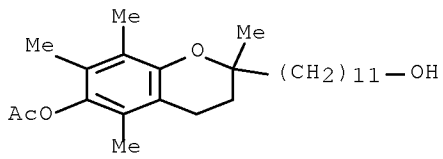
RN 918876-02-5 ZCAPLUS
CN 2H-1-Benzopyran-2-undecanol, 3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl- (CA INDEX NAME)



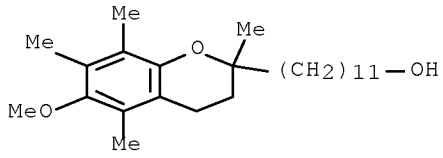
RN 918876-04-7 ZCAPLUS
CN 2H-1-Benzopyran, 3,4-dihydro-6-methoxy-2,5,7,8-tetramethyl-2-[11-(phenylmethoxy)undecyl]- (CA INDEX NAME)



RN 918876-05-8 ZCAPLUS
CN 2H-1-Benzopyran-2-undecanol, 6-(acetyloxy)-3,4-dihydro-2,5,7,8-tetramethyl- (CA INDEX NAME)

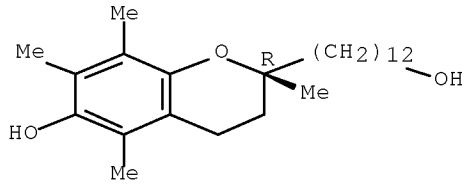


RN 918876-06-9 ZCAPLUS
CN 2H-1-Benzopyran-2-undecanol, 3,4-dihydro-6-methoxy-2,5,7,8-tetramethyl- (CA INDEX NAME)

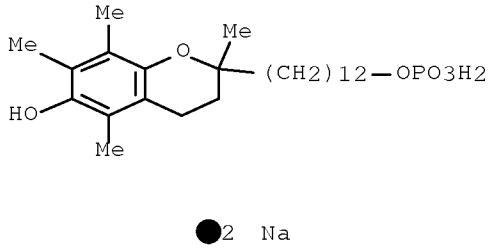


RN 918876-10-5 ZCAPLUS
CN 2H-1-Benzopyran-2-dodecanol, 3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl-, (2R)- (CA INDEX NAME)

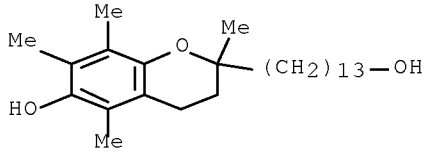
Absolute stereochemistry. Rotation (-).



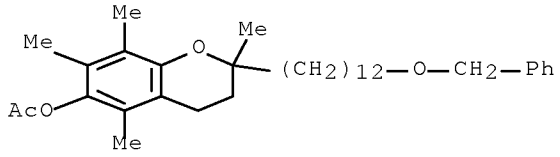
RN 918876-13-8 ZCAPLUS
CN 2H-1-Benzopyran-2-dodecanol, 3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl-, 2-(dihydrogen phosphate), sodium salt (1:2) (CA INDEX NAME)



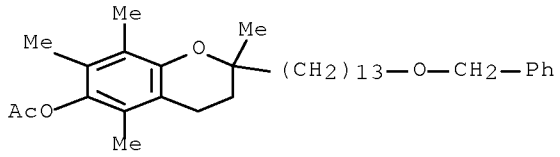
RN 918876-28-5 ZCAPLUS
CN 2H-1-Benzopyran-2-tridecanol, 3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl- (CA INDEX NAME)



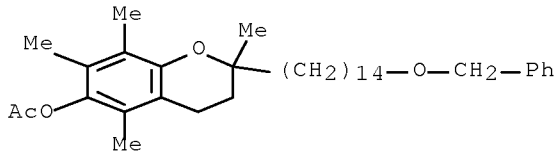
RN 918876-29-6 ZCAPLUS
CN 2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-[12-(phenylmethoxy)dodecyl]-, 6-acetate (CA INDEX NAME)



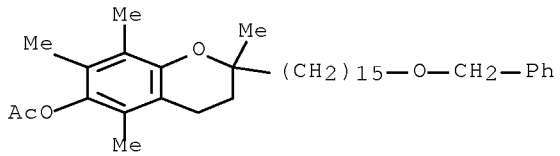
RN 918876-30-9 ZCAPLUS
CN 2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-[13-(phenylmethoxy)tridecyl]-, 6-acetate (CA INDEX NAME)



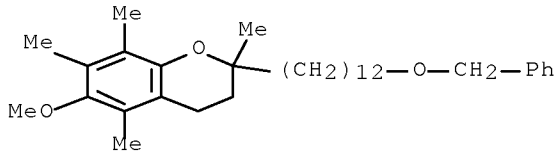
RN 918876-31-0 ZCAPLUS
CN 2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-[14-(phenylmethoxy)tetradecyl]-, 6-acetate (CA INDEX NAME)



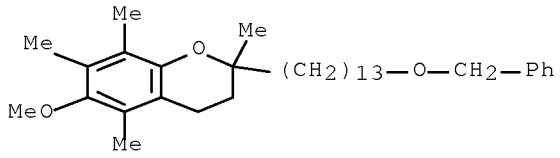
RN 918876-32-1 ZCAPLUS
CN 2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-[15-(phenylmethoxy)pentadecyl]-, 6-acetate (CA INDEX NAME)



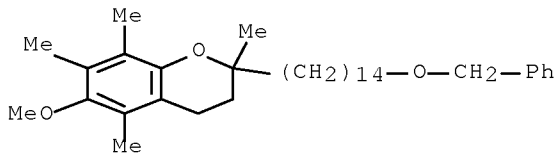
RN 918876-33-2 ZCAPLUS
CN 2H-1-Benzopyran, 3,4-dihydro-6-methoxy-2,5,7,8-tetramethyl-2-[12-(phenylmethoxy)dodecyl]- (CA INDEX NAME)



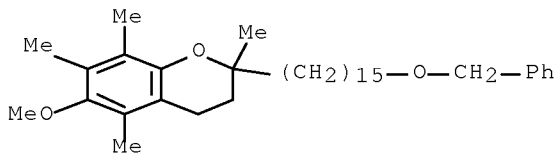
RN 918876-34-3 ZCAPLUS
CN 2H-1-Benzopyran, 3,4-dihydro-6-methoxy-2,5,7,8-tetramethyl-2-[13-(phenylmethoxy)tridecyl]- (CA INDEX NAME)



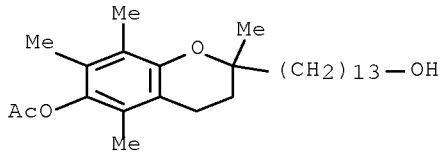
RN 918876-35-4 ZCAPLUS
CN 2H-1-Benzopyran, 3,4-dihydro-6-methoxy-2,5,7,8-tetramethyl-2-[14-(phenylmethoxy)tetradecyl]- (CA INDEX NAME)



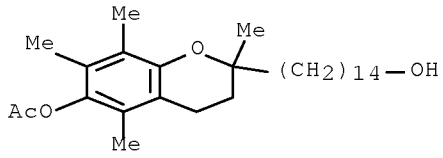
RN 918876-36-5 ZCAPLUS
CN 2H-1-Benzopyran, 3,4-dihydro-6-methoxy-2,5,7,8-tetramethyl-2-[15-(phenylmethoxy)pentadecyl]- (CA INDEX NAME)



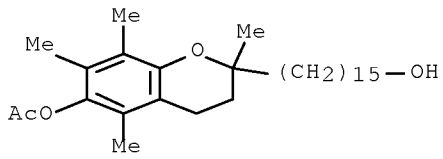
RN 918876-38-7 ZCAPLUS
CN 2H-1-Benzopyran-2-tridecanol, 6-(acetyloxy)-3,4-dihydro-2,5,7,8-tetramethyl- (CA INDEX NAME)



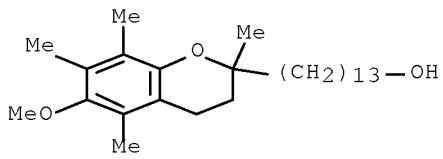
RN 918876-39-8 ZCAPLUS
CN 2H-1-Benzopyran-2-tetradecanol, 6-(acetyloxy)-3,4-dihydro-2,5,7,8-tetramethyl- (CA INDEX NAME)



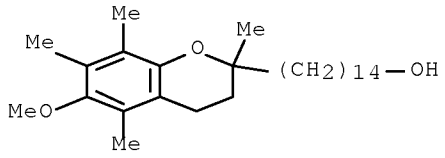
RN 918876-40-1 ZCAPLUS
CN 2H-1-Benzopyran-2-pentadecanol, 6-(acetyloxy)-3,4-dihydro-2,5,7,8-tetramethyl- (CA INDEX NAME)



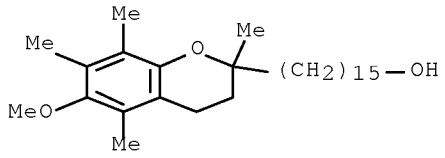
RN 918876-42-3 ZCAPLUS
CN 2H-1-Benzopyran-2-tridecanol, 3,4-dihydro-6-methoxy-2,5,7,8-tetramethyl- (CA INDEX NAME)



RN 918876-43-4 ZCAPLUS
CN 2H-1-Benzopyran-2-tetradecanol, 3,4-dihydro-6-methoxy-2,5,7,8-tetramethyl- (CA INDEX NAME)

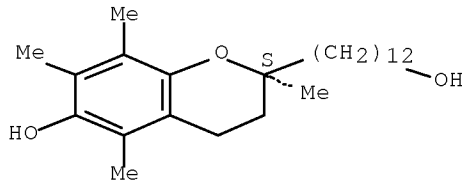


RN 918876-44-5 ZCAPLUS
CN 2H-1-Benzopyran-2-pentadecanol, 3,4-dihydro-6-methoxy-2,5,7,8-tetramethyl- (CA INDEX NAME)



RN 918876-46-7 ZCAPLUS
CN 2H-1-Benzopyran-2-dodecanol, 3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl-, (2S)- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)
REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 7 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2006:947197 ZCAPLUS Full-text
DOCUMENT NUMBER: 146:287535
TITLE: α-Tocopherol regulation of hepatic cytochrome P450s and ABC transporters in rats
AUTHOR(S): Mustacich, Debbie J.; Leonard, Scott W.; Devereaux, Michael W.; Sokol, Ronald J.; Traber, Maret G.
CORPORATE SOURCE: Linus Pauling Institute, Oregon State University, Corvallis, OR, 97331, USA
SOURCE: Free Radical Biology & Medicine (2006), 41(7), 1069-1078
CODEN: FRBMEH; ISSN: 0891-5849
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

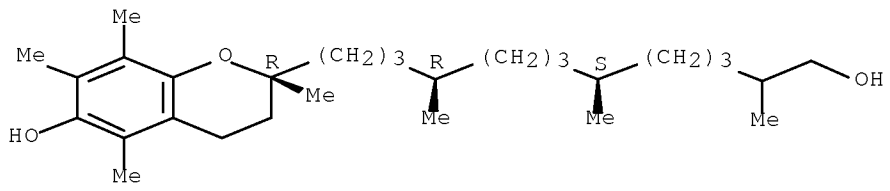
AB To test the hypothesis that supra-elevated hepatic α-tocopherol concns. would up-regulate mechanisms that result in increased hepatic α-tocopherol metabolism and excretion, rats received daily s.c. α-tocopherol injections (10 mg/100 g body wt) and then were sacrificed on Day 0 or 12 h following their previous injection on Days 3, 6, 9, 12, 15, and 18. Liver α-tocopherol concns. increased from 12±1 nmol/g (mean ± SE) to 819±74 (Day 3), decreased at Day 9 (486±67), and continued to decrease through Day 18 (338±37). α-Tocopherol metabolites and their intermediates increased and decreased similarly to α-tocopherol albeit at lower concns. There were no changes in known vitamin E regulatory proteins, i.e., hepatic α-tocopherol transfer protein or cytochrome P 450 (CYP) 4F. In contrast, both CYP3A and CYP2B, key xenobiotic metabolizing enzymes, doubled by Day 6 and remained elevated, while P 450 reductase increased more slowly. Consistent with the decrease in liver α-tocopherol concns., a protein involved in biliary xenobiotic excretion, p-glycoprotein, increased at Day 9, doubling by Day 15. Thus hepatic α-tocopherol concns. altered hepatic proteins involved in metabolism and disposition of xenobiotic agents.

IT 458523-39-2
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(α-Tocopherol regulation of hepatic cytochrome P450s and ABC transporters in rats)

RN 458523-39-2 ZCAPLUS

CN 2H-1-Benzopyran-2-tridecanol, 3,4-dihydro-6-hydroxy(-β,κ,ζ,2,5,7,8-heptamethyl)-, (κR,ζS,2R)- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 22 THERE ARE 22 CAPLUS RECORDS THAT CITE THIS RECORD (22 CITINGS)

REFERENCE COUNT: 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 8 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2006:391504 ZCAPLUS Full-text

DOCUMENT NUMBER: 145:79029

TITLE: Preparation of fluorescent tocopherols for use in protein binding and localization with the α-tocopherol transfer protein

AUTHOR(S): Nava, Phillip; Cecchini, Matt; Chirico, Sara; Gordon, Heather; Morley, Samantha; Manor, Danny; Atkinson, Jeffrey

CORPORATE SOURCE: Department of Chemistry and Centre for Biotechnology, Brock University, St. Catharines, ON, L2S 3A1, Can.

SOURCE: Bioorganic & Medicinal Chemistry (2006), 14(11), 3721-3736
CODEN: BMECEP; ISSN: 0968-0896

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

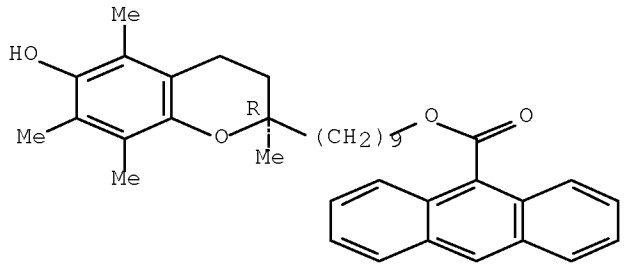
LANGUAGE: English
OTHER SOURCE(S): CASREACT 145:79029

AB Sixteen fluorescent analogs of the lipid-soluble antioxidant vitamin α-tocopherol were prepared incorporating fluorophores at the terminus of ω-functionalized 2-n-alkyl-substituted chromanols that match the methylation pattern of α-tocopherol, the most biol. active form of vitamin E. The fluorophores used include 9-anthroyloxy (AO), 7-nitrobenz-2-oxa-1,3-diazole (NBD), N-methylanthranilamide (NMA), and dansyl (DAN). The compds. were designed to function as fluorescent reporter ligands for protein-binding and lipid transfer assays. The fluorophores were chosen to maximize the fluorescence changes observed upon moving from an aqueous environment (low fluorescence intensity) to an hydrophobic environment such as a protein's binding site (high fluorescence intensity). Anthroyloxy and nitrobenzoxadiazole derivs., having a C9-carbon chain between the chromanol and the fluorophore, were shown to bind specifically and reversibly to recombinant human tocopherol transfer protein (α-TTP) with dissociation consts. of approx. 280 and 60 nM, resp., as compared to 25 nM for the natural ligand 2R,4'R,8'R-α-tocopherol. Thus, compds. have been prepared that allow the investigation of the rate of α-TTP-mediated inter-membrane transfer of α-tocopherol and to investigate the mechanism of α-TTP function at membranes of different composition

IT 869385-41-1P 892494-79-0P 892494-80-3P
892494-81-4P
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(preparation of fluorescent tocopherols for use in protein binding and localization with α-tocopherol transfer protein)

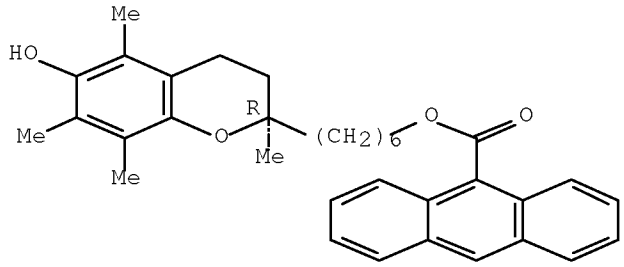
RN 869385-41-1 ZCAPLUS
CN 9-Anthracenecarboxylic acid, 9-[(2R)-3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl-2H-1-benzopyran-2-yl]nonyl ester (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



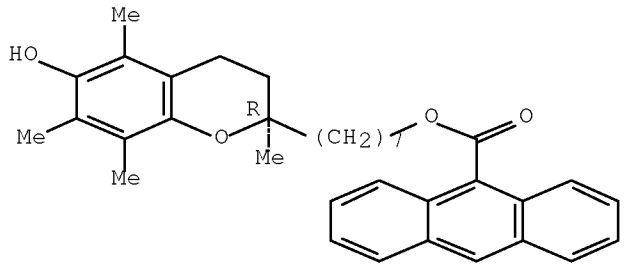
RN 892494-79-0 ZCAPLUS
CN 9-Anthracenecarboxylic acid, 6-[(2R)-3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl-2H-1-benzopyran-2-yl]hexyl ester (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



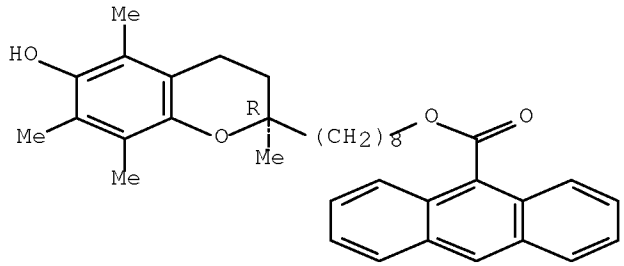
RN 892494-80-3 ZCAPLUS
CN 9-Anthracenecarboxylic acid, 7-[(2R)-3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl-2H-1-benzopyran-2-yl]heptyl ester (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 892494-81-4 ZCAPLUS
CN 9-Anthracenecarboxylic acid, 8-[(2R)-3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl-2H-1-benzopyran-2-yl]octyl ester (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)
REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 9 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:291499 ZCAPLUS Full-text
DOCUMENT NUMBER: 143:454449

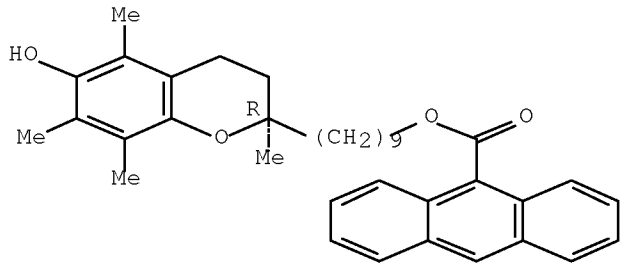
TITLE: Fluorescent tocopherols as probes of intervesicular transfer catalyzed by the α-tocopherol transfer protein
AUTHOR(S): Atkinson, Jeffrey K.; Nava, Phillip; Frahm, Grant; Curtis, Valerie; Manor, Danny
CORPORATE SOURCE: Department of Chemistry and Centre for Biotechnology, Brock University, St. Catharines, ON, Can.
SOURCE: Annals of the New York Academy of Sciences (2004), 1031(Vitamin E and Health), 324-327
CODEN: ANYAA9; ISSN: 0077-8923
PUBLISHER: New York Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Novel fluorescent analogs of α-tocopherol have been prepared that incorporate the useful fluorophores nitrobenoxadiazyl (NBD) and anthroyloxy (AO). Both fluorescent tocopherol analogs bind specifically to recombinant human tocopherol transfer protein (hTTP). The NBD-α-tocopherol is particularly useful for protein-binding assays, whereas the AO-α-tocopherol was designed to be one of a pair of chromophores for a fluorescence resonance energy transfer (FRET) assay of intervesicular tocopherol transfer. It is now possible to follow AO-α-tocopherol transfer from donor lipid vesicles composed of predominantly phosphatidylcholine (PC) to acceptor lipid vesicles containing PC and a quenching lipid NBD-PE (2-dipalmitoyl-sn-glycero-3- phosphoethanolamine-N-[7-nitro-2-1,3-benzoxadiazol-4-yl]). The presence of hTTP substantially increases the rate of AO-α-tocopherol transfer over the uncatalyzed spontaneous rate.

IT 869385-41-1
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(fluorescent tocopherols as probes of intervesicular transfer catalyzed by the α-tocopherol transfer protein)

RN 869385-41-1 ZCAPLUS
CN 9-Anthracenecarboxylic acid, 9-[(2R)-3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl-2H-1-benzopyran-2-yl]nonyl ester (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 10 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:280721 ZCAPLUS Full-text
DOCUMENT NUMBER: 142:349081
TITLE: Chomanols and related compounds promoting differentiation of precursors of oligodendrocytes and

modulating microglial activation, preparation thereof, compositions, and therapeutic use

INVENTOR(S): Luu, Bang; Heuschling, Paul; Muller, Thierry

PATENT ASSIGNEE(S): Universite Louis Pasteur, Fr.; Centre National de la Recherche Scientifique CNRS; Centre Universitaire du Luxembourg

SOURCE: Fr. Demande, 27 pp.
CODEN: FRXXBL

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

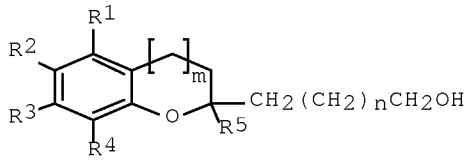
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2860233	A1	20050401	FR 2003-11325	20030926
FR 2860233	B1	20071019		
AU 2004276040	A1	20050407	AU 2004-276040	20040924
AU 2004276040	B2	20090423		
CA 2536791	A1	20050407	CA 2004-2536791	20040924
WO 2005030748	A1	20050407	WO 2004-FR2424	20040924
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1664012	A1	20060607	EP 2004-787448	20040924
EP 1664012	B1	20090401		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
CN 1849312	A	20061018	CN 2004-80025960	20040924
JP 2007506714	T	20070322	JP 2006-527448	20040924
AT 427307	T	20090415	AT 2004-787448	20040924
ES 2324616	T3	20090811	ES 2004-787448	20040924
US 20070105946	A1	20070510	US 2006-572933	20060322
HK 1092400	A1	20090828	HK 2006-113028	20061128

PRIORITY APPLN. INFO.: FR 2003-11325 A 20030926
WO 2004-FR2424 W 20040924

OTHER SOURCE(S): MARPAT 142:349081

GI



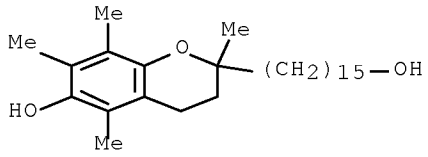
I

AB The invention discloses isolated or synthetic compds., especially I [R1-R4 = H, OH, (un)branched C1-6 alkyl, etc.; R5 = H, (un)branched C1-6 alkyl; m = 0-2; n = 8-25] which cause the differentiation of oligodendrocyte precursor cells, as well as modulation of the activation of microglia. Also disclosed are methods for preparation of such compds., as well as the use of the these compds. within the framework of the preparation of a pharmaceutical composition for the prevention or the treatment of diseases affecting the nervous system.

IT 848814-62-0P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(chomanols and related compds. promoting differentiation of oligodendrocyte precursors and modulating microglial activation, preparation thereof, compns., and therapeutic use)

RN 848814-62-0 ZCAPLUS

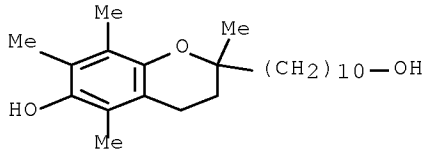
CN 2H-1-Benzopyran-2-pentadecanol, 3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl- (CA INDEX NAME)



IT 824404-22-0 824404-29-7 824404-30-0
824404-31-1
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(chomanols and related compds. promoting differentiation of oligodendrocyte precursors and modulating microglial activation, preparation thereof, compns., and therapeutic use)

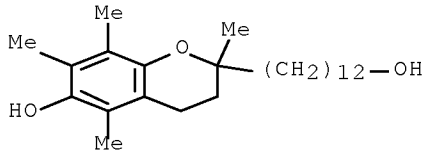
RN 824404-22-0 ZCAPLUS

CN 2H-1-Benzopyran-2-decanol, 3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl- (CA INDEX NAME)

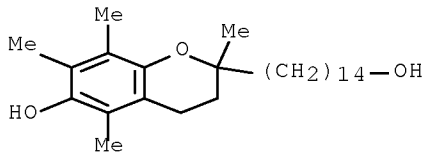


RN 824404-29-7 ZCAPLUS

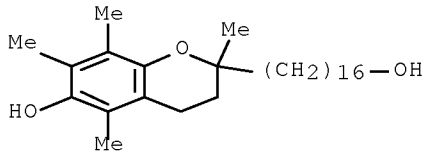
CN 2H-1-Benzopyran-2-dodecanol, 3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl- (CA INDEX NAME)



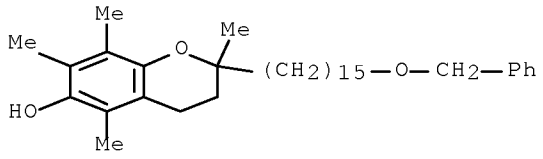
RN 824404-30-0 ZCAPLUS
CN 2H-1-Benzopyran-2-tetradecanol, 3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl- (CA INDEX NAME)



RN 824404-31-1 ZCAPLUS
CN 2H-1-Benzopyran-2-hexadecanol, 3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl- (CA INDEX NAME)



IT 848814-61-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(chomanols and related compds. promoting differentiation of oligodendrocyte precursors and modulating microglial activation, preparation thereof, compns., and therapeutic use)
RN 848814-61-9 ZCAPLUS
CN 2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-[15-(phenylmethoxy)pentadecyl]- (CA INDEX NAME)



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 11 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:967772 ZCAPLUS Full-text
DOCUMENT NUMBER: 142:134746
TITLE: Tocopherol long chain fatty alcohols decrease the

production of TNF-α and NO radicals by activated microglial cells

AUTHOR(S): Muller, Thierry; Grandbarbe, Luc; Morga, Eleonora; Heuschling, Paul; Luu, Bang

CORPORATE SOURCE: Laboratoire de chimie organique des substances naturelles, Centre de Neurochimie, UMR 7123 CNRS, Universite Louis Pasteur, Strasbourg, 67084, Fr.

SOURCE: Bioorganic & Medicinal Chemistry Letters (2004), 14(24), 6023-6026
CODEN: BMCLE8; ISSN: 0960-894X

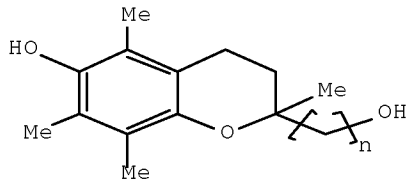
PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 142:134746

GI



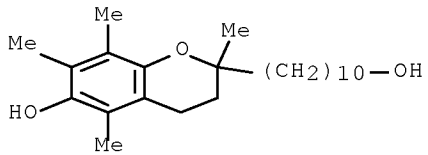
I

AB The synthesis of a series of tocopherol long chain Fatty Alcs. (TFA) I (n = 10,12,14,16) and their biol. activities on the modulation of microglial activation are described. Specifically, the 2-(12-hydroxy-dodecyl)-2,5,7,8-tetramethyl-chroman-6-ol, the TFA bearing 12 carbon atoms on the side chain (n = 12), shows the most potent inhibition of secretion on nitric oxide (NO) and tumor necrosis factor-α (TNF-α) by lipopolysaccharide (LPS)-activated microglia.

IT 824404-22-0P 824404-29-7P 824404-30-0P
824404-31-1P
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of tocopherol long chain fatty alcs. and their effect on the production of TNF-α and NO radicals by activated microglial cells)

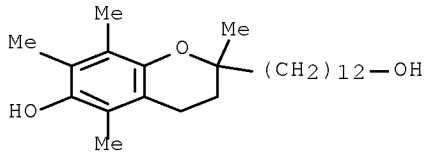
RN 824404-22-0 ZCAPLUS

CN 2H-1-Benzopyran-2-decanol, 3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl- (CA INDEX NAME)

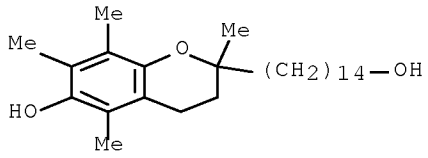


RN 824404-29-7 ZCAPLUS

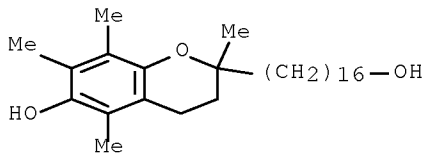
CN 2H-1-Benzopyran-2-dodecanol, 3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl- (CA INDEX NAME)



RN 824404-30-0 ZCAPLUS
CN 2H-1-Benzopyran-2-tetradecanol, 3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl- (CA INDEX NAME)



RN 824404-31-1 ZCAPLUS
CN 2H-1-Benzopyran-2-hexadecanol, 3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl- (CA INDEX NAME)

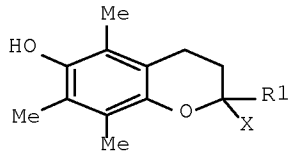


OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 12 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:886144 ZCAPLUS Full-text
DOCUMENT NUMBER: 137:384749
TITLE: Preparation of chromans having functional group-terminated isoprene chain, and their intermediates from allyl alcohols and trimethylhydroquinone
INVENTOR(S): Kajiyashiki, Tsuyoshi; Kido, Yoichi; Onishi, Takashi
PATENT ASSIGNEE(S): Kuraray Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 2002332283 A 20021122 JP 2002-45697 20020222
PRIORITY APPLN. INFO.: JP 2001-67276 A 20010309
OTHER SOURCE(S): MARPAT 137:384749
GI



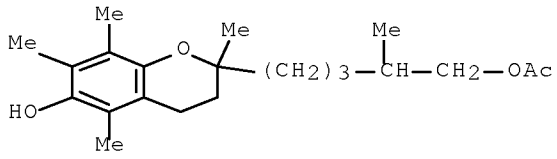
I

AB Chromans I [R1 = (un)substituted hydrocarbyl; X = HO(CH2)nCHR4CHR3CH2CHR2, Q1-Q3; the broken line may be double bond; R2-R4 = H, (un)substituted hydrocarbyl; n = 1, 2; p = 0-3], which may be useful as (intermediates for) pharmaceuticals and feed additives, are prepared by cyclization of trimethylhydroquinone (II) with H2C:CHCR1XOH (R1-R4, X, n, p = same as above), followed by optional reductive ring-opening of the resulting I (X = Q2, Q3; R1-R4, n, p = same as above). Thus, 2-methyl-1-(4-methyltetrahydropyran-2-yl)-3-buten-2-ol was refluxed with II in the presence of ZnCl2 in AcOH for 6 h to give 69.0% 3,4-dihydro-2,5,7,8-tetramethyl-2-(4-methyltetrahydropyran-2-yl)methyl-2H- 1-benzopyran-6-ol.

IT 475680-65-0P 475680-66-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of chromans as (intermediates for) pharmaceuticals and feed additives)

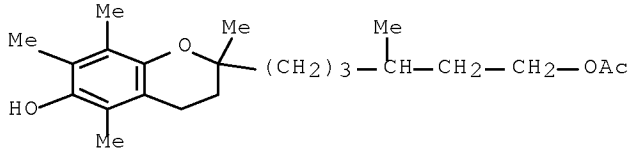
RN 475680-65-0 ZCAPLUS

CN 2H-1-Benzopyran-2-pentanol, 3,4-dihydro-6-hydroxy-β,2,5,7,8-pentamethyl-, 2-acetate (CA INDEX NAME)



RN 475680-66-1 ZCAPLUS

CN 2H-1-Benzopyran-2-hexanol, 3,4-dihydro-6-hydroxy-γ,2,5,7,8-pentamethyl-, 2-acetate (CA INDEX NAME)

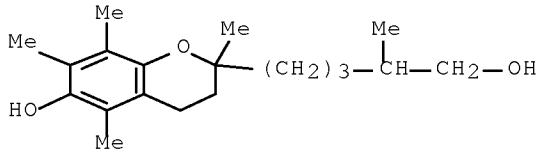


IT 19414-93-8P 475680-64-9P 475680-67-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of chromans as (intermediates for) pharmaceuticals and feed additives)

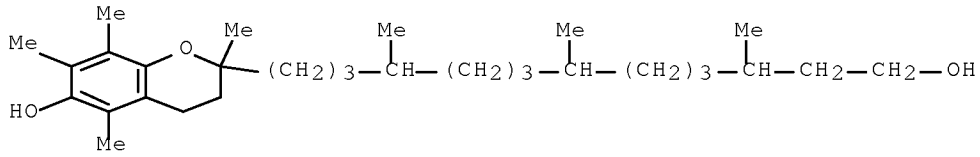
RN 19414-93-8 ZCAPLUS

CN 2H-1-Benzopyran-2-pentanol, 3,4-dihydro-6-hydroxy-β,2,5,7,8-pentamethyl- (CA INDEX NAME)



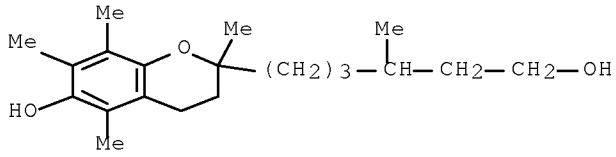
RN 475680-64-9 ZCAPLUS

CN 2H-1-Benzopyran-2-tetradecanol, 3,4-dihydro-6-hydroxy-η,γ,λ,2,5,7,8-heptamethyl- (CA INDEX NAME)



RN 475680-67-2 ZCAPLUS

CN 2H-1-Benzopyran-2-hexanol, 3,4-dihydro-6-hydroxy-γ,2,5,7,8-pentamethyl- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L15 ANSWER 13 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:541198 ZCAPLUS Full-text

DOCUMENT NUMBER: 137:231873

TITLE: Cytochrome P450 ω-hydroxylase pathway of tocopherol catabolism. Novel mechanism of regulation of vitamin E status

AUTHOR(S): Sontag, Timothy J.; Parker, Robert S.

CORPORATE SOURCE: Division of Nutritional Sciences, Cornell University, Ithaca, NY, 14853, USA

SOURCE: Journal of Biological Chemistry (2002), 277(28), 25290-25296

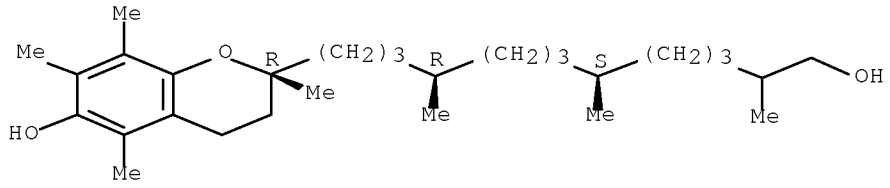
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The authors describe a pathway involving cytochrome P 450-mediated ω-hydroxylation of the tocopherol phytyl side chain followed by stepwise removal of two- or three-carbon moieties, ultimately yielding the 3'-carboxychromanol metabolite that is excreted in urine. All key intermediates of γ-tocopherol metabolism via this pathway were identified in hepatocyte cultures using gas chromatog.-mass spectrometry. NADPH-dependent synthesis of the initial γ- and α-tocopherol 13'-hydroxy and -carboxy metabolites was demonstrated in rat and human liver microsomes. Functional anal. of several recombinant human liver P 450 enzymes revealed that tocopherol-ω-hydroxylase activity was associated only with CYP4F2, which also catalyzes ω-hydroxylation of leukotriene B4 and arachidonic acid. Tocopherol-ω-hydroxylase exhibited similar binding affinities but markedly higher catalytic activities for γ-tocopherol than α-tocopherol, suggesting a role for this pathway in the preferential physiol. retention of α-tocopherol and elimination of γ-tocopherol. Sesamin potently inhibited tocopherol-ω-hydroxylase activity exhibited by CYP4F2 and rat or human liver microsomes. Since dietary sesamin also results in elevated tocopherol levels in vivo, this pathway appears to represent a functionally significant means of regulating vitamin E status.

IT 458523-39-2
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(cytochrome P 450 ω-hydroxylase pathway of tocopherol catabolism in relation to regulation of vitamin E status)

RN 458523-39-2 ZCAPLUS
CN 2H-1-Benzopyran-2-tridecanol, 3,4-dihydro-6-hydroxy(-β,κ,ζ,2,5,7,8-heptamethyl)-, (κR,ζS,2R)- (CA INDEX NAME)

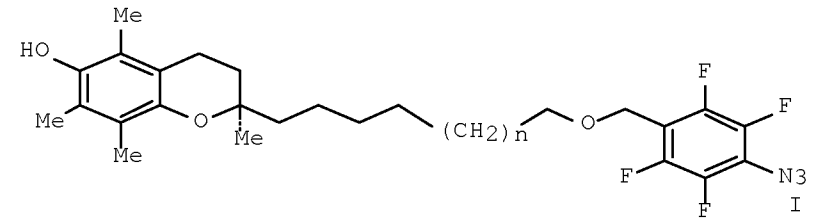
Absolute stereochemistry.



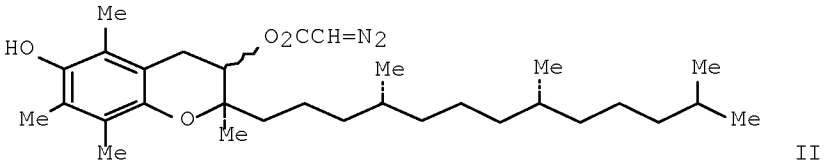
OS.CITING REF COUNT: 160 THERE ARE 160 CAPLUS RECORDS THAT CITE THIS RECORD (160 CITINGS)
REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 14 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2000:196484 ZCAPLUS Full-text
DOCUMENT NUMBER: 132:347760
TITLE: Synthesis of Phytyl- and Chroman-Derivatized Photoaffinity Labels Based on α-Tocopherol
AUTHOR(S): Lei, Huangshu; Atkinson, Jeffrey
CORPORATE SOURCE: Institute for Molecular Catalysis Department of Chemistry, Brock University, St. Catharines, ON, L2S 3A1, Can.
SOURCE: Journal of Organic Chemistry (2000), 65(8), 2560-2567

CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 132:347760
GI



I



II

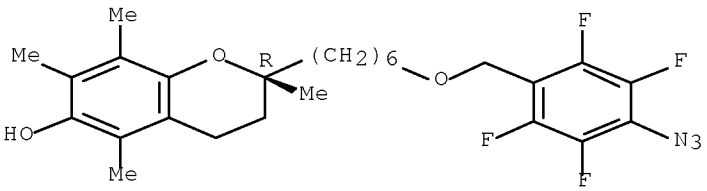
AB Photoaffinity analogs of α-tocopherol have been prepared by substituting photosensitive functional groups at either the terminus of an alkyl chain of varying length mimicking the phytyl tail or on C-3 of the chroman portion of tocopherol. The alkyl chain-modified compds. I (n = 1-4) contain a hexyl to nonyl alkyl chain extending from C-2 of the chroman, terminating in a tetrafluoroazidobenzyloxy group. These compds. were prepared starting from the com. available Trolox acid, followed by esterification, protection, and reduction to the silyl-protected Trolox aldehyde, which was coupled using Wittig chemical to different ω-hydroxyphosphonium bromides. Reduction of the alkene product, coupling with p-azidotetrafluorobenzyl bromide, and deprotection of the phenolic silyl group gave compds. I in excellent yields. Chroman-functionalized photoaffinity labels were synthesized starting from the protected tocopherol chromene 16b which was a key intermediate for preparation of a 3-hydroxy derivative, either by reduction of epoxides produced directly with Jacobsen's catalysts or by treatment with NBS in wet DME to give two stereoisomeric bromohydrins which were cyclized and reduced to give the phenol-protected C-3 alcs. These alcs. were then converted to diazoacetate esters, and the protecting group was removed to give 3-diazoacetoxy α-tocopherols II.

IT 220953-86-6P 220953-93-5P 220953-94-6P
RL: PNU (Preparation, unclassified); PREP (Preparation)
(synthesis of phytyl- and chroman-derivatized photoaffinity labels based on α-tocopherol)

RN 220953-86-6 ZCAPLUS

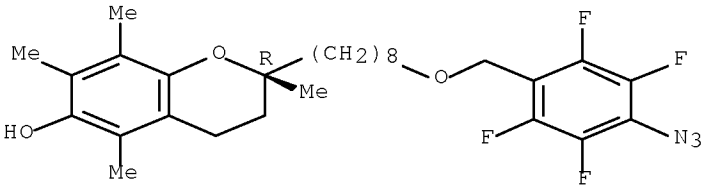
CN 2H-1-Benzopyran-6-ol, 2-[6-[(4-azido-2,3,5,6-tetrafluorophenyl)methoxy]hexyl]-3,4-dihydro-2,5,7,8-tetramethyl-, (2R)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



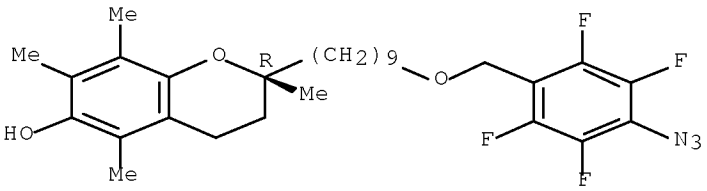
RN 220953-93-5 ZCAPLUS
CN 2H-1-Benzopyran-6-ol, 2-[8-[(4-azido-2,3,5,6-tetrafluorophenyl)methoxy]octyl]-3,4-dihydro-2,5,7,8-tetramethyl-, (2R)-(CA INDEX NAME)

Absolute stereochemistry.



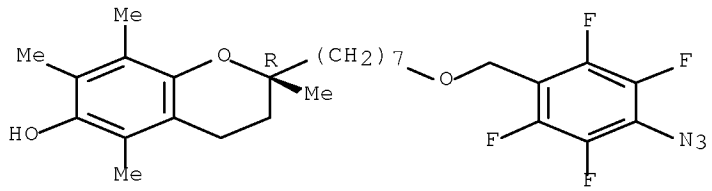
RN 220953-94-6 ZCAPLUS
CN 2H-1-Benzopyran-6-ol, 2-[9-[(4-azido-2,3,5,6-tetrafluorophenyl)methoxy]nonyl]-3,4-dihydro-2,5,7,8-tetramethyl-, (2R)-(CA INDEX NAME)

Absolute stereochemistry.



IT 220953-92-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of phytyl- and chroman-derivatized photoaffinity labels based on α-tocopherol)
RN 220953-92-4 ZCAPLUS
CN 2H-1-Benzopyran-6-ol, 2-[7-[(4-azido-2,3,5,6-tetrafluorophenyl)methoxy]heptyl]-3,4-dihydro-2,5,7,8-tetramethyl-, (2R)-(CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 23 THERE ARE 23 CAPLUS RECORDS THAT CITE THIS RECORD (23 CITINGS)
REFERENCE COUNT: 65 THERE ARE 65 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

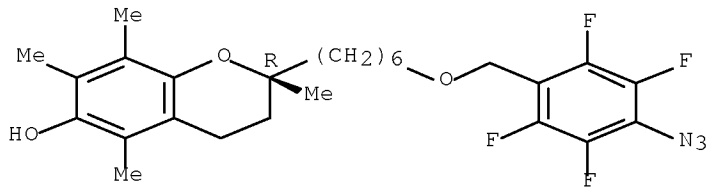
L15 ANSWER 15 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1999:49753 ZCAPLUS Full-text
DOCUMENT NUMBER: 130:209834
TITLE: Synthesis of photoaffinity label analogs of α-tocopherol
AUTHOR(S): Lei, Huangshu; Marks, Virginia; Pasquale, Tony; Atkinson, Jeffrey K.
CORPORATE SOURCE: Department of Chemistry, Brock University, St. Catharines, ON, L2S 3A1, Can.
SOURCE: Bioorganic & Medicinal Chemistry Letters (1998), 8(24), 3453-3458
CODEN: BMCLE8; ISSN: 0960-894X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Photoaffinity analogs of α-tocopherol have been synthesized that incorporate the photosensitive 4-azido-2,3,5,6-tetrafluorobenzyloxy group at the terminus of unbranched analogs of the naturally occurring phytyl side chain. An intermediate from these syntheses has also been used to generate a supported ligand for bioaffinity chromatog. of α-tocopherol binding proteins.

IT 220953-86-6P 220953-92-4P 220953-93-5P
220953-94-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of photoaffinity label analogs of α-tocopherol)

RN 220953-86-6 ZCAPLUS
CN 2H-1-Benzopyran-6-ol, 2-[6-[(4-azido-2,3,5,6-tetrafluorophenyl)methoxy]hexyl]-3,4-dihydro-2,5,7,8-tetramethyl-, (2R)- (CA INDEX NAME)

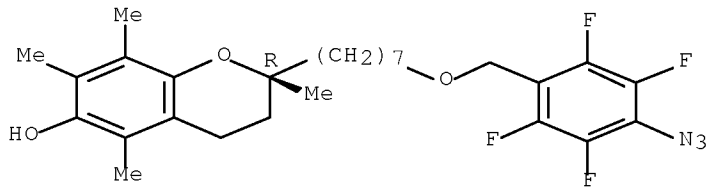
Absolute stereochemistry. Rotation (+).



RN 220953-92-4 ZCAPLUS
CN 2H-1-Benzopyran-6-ol, 2-[7-[(4-azido-2,3,5,6-tetrafluorophenyl)methoxy]heptyl]-3,4-dihydro-2,5,7,8-tetramethyl-, (2R)-

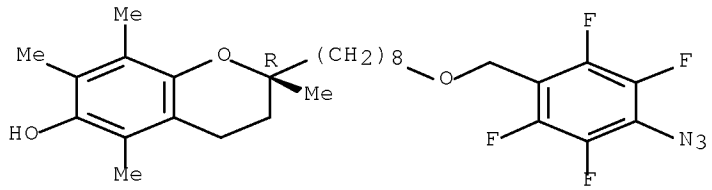
(CA INDEX NAME)

Absolute stereochemistry.



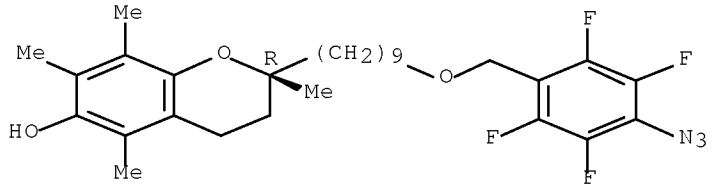
RN 220953-93-5 ZCAPLUS
CN 2H-1-Benzopyran-6-ol, 2-[8-[(4-azido-2,3,5,6-tetrafluorophenyl)methoxy]octyl]-3,4-dihydro-2,5,7,8-tetramethyl-, (2R)-
(CA INDEX NAME)

Absolute stereochemistry.



RN 220953-94-6 ZCAPLUS
CN 2H-1-Benzopyran-6-ol, 2-[9-[(4-azido-2,3,5,6-tetrafluorophenyl)methoxy]nonyl]-3,4-dihydro-2,5,7,8-tetramethyl-, (2R)-
(CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)
REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

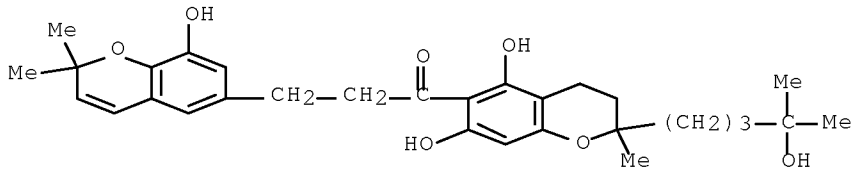
L15 ANSWER 16 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1998:131043 ZCAPLUS Full-text
DOCUMENT NUMBER: 128:241799
ORIGINAL REFERENCE NO.: 128:47829a,47832a
TITLE: Chemistry of Esenbeckia genus. IV. Dihydrochalcones and coumarins of Esenbeckia grandiflora subsp.

grandiflora
AUTHOR(S): Trani, Marina; Delle Monache, Franco; Delle Monache, Giuliano; Yunes, Rosendo A.; Falkenberg, Daniel B.
CORPORATE SOURCE: CNR, Centro Chimica dei Recettori, Rome, I-00168, Italy
SOURCE: Gazzetta Chimica Italiana (1997), 127(8), 415-418
CODEN: GCITA9; ISSN: 0016-5603
PUBLISHER: Societa Chimica Italiana
DOCUMENT TYPE: Journal
LANGUAGE: English

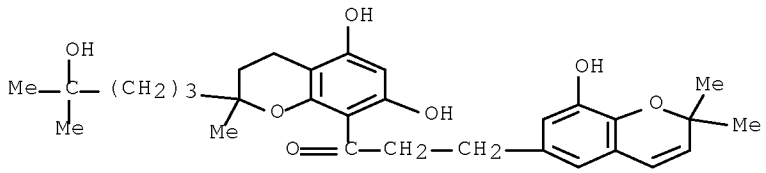
AB Four coumarins, three dihydrochalcones, (-)-epi-gallocatechin and two flavonol rhamnosides have been isolated from the leaves and branches of Esenbeckia grandiflora subsp. grandiflora (Rutaceae) and their structures elucidated. The coumarin B, and dihydrochalcones F1, F2 and F3 are novel compds. Levorotatory heraclenol is reported for the first time.

IT 205109-23-5P 205109-24-6P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and properties of)

RN 205109-23-5 ZCAPLUS
CN 1-Propanone, 1-[3,4-dihydro-5,7-dihydroxy-2-(4-hydroxy-4-methylpentyl)-2-methyl-2H-1-benzopyran-6-yl]-3-(8-hydroxy-2,2-dimethyl-2H-1-benzopyran-6-yl)- (CA INDEX NAME)



RN 205109-24-6 ZCAPLUS
CN 1-Propanone, 1-[3,4-dihydro-5,7-dihydroxy-2-(4-hydroxy-4-methylpentyl)-2-methyl-2H-1-benzopyran-8-yl]-3-(8-hydroxy-2,2-dimethyl-2H-1-benzopyran-6-yl)- (CA INDEX NAME)



OS.CITING REF COUNT: 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 17 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1991:143143 ZCAPLUS Full-text
DOCUMENT NUMBER: 114:143143
ORIGINAL REFERENCE NO.: 114:24285a,24288a
TITLE: Preparation of 2-benzopyranylalkyl guanidinophenyl

ethers and analogs as Maillard reaction inhibitors and antioxidants

INVENTOR(S): Ohuchida, Shuichi; Toda, Masaaki; Miyamoto, Tsumoru

PATENT ASSIGNEE(S): Ono Pharmaceutical Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 121 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

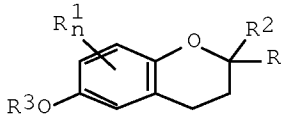
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 387771	A2	19900919	EP 1990-104680	19900312
EP 387771	A3	19901227		
EP 387771	B1	19950607		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
CA 2011899	A1	19900913	CA 1990-2011899	19900309
US 5055598	A	19911008	US 1990-491876	19900312
ES 2075079	T3	19951001	ES 1990-104680	19900312
JP 03204874	A	19910906	JP 1990-59845	19900313
JP 2955717	B2	19991004		
US 5169957	A	19921208	US 1991-736321	19910726
US 5266709	A	19931130	US 1992-936285	19920828
US 5384414	A	19950124	US 1993-107576	19930818
US 5508450	A	19960416	US 1994-316332	19940930

PRIORITY APPLN. INFO.:

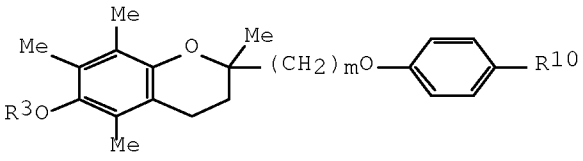
JP 1989-60317	A	19890313
JP 1989-282805	A	19891030
US 1990-491876	A3	19900312
US 1991-736321	A3	19910726
US 1992-936285	A3	19920828
US 1993-107576	A3	19930818

OTHER SOURCE(S): MARPAT 114:143143

GI



I



II

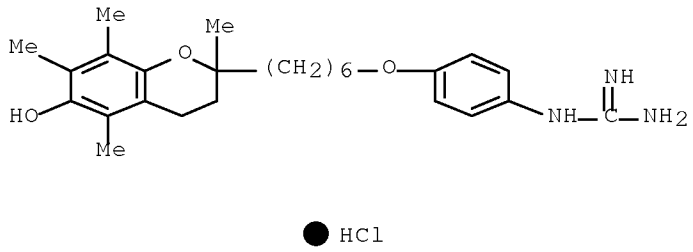
AB The title compds. [I; R = YMZWNR4C(:NH)NHR5; R1,R2 = H, alkyl, alkoxy; R12 = atoms to complete a C6 carbocyclic ring; R3 = H, acyl, Bz; R4 = H, alkyl; R5 = H, alkyl, NH2; Y = alkylene, alkenylene, alkynylene; M = bond, DB; B = alkylene, (un)substituted phenylenediyl; D = O, S; Z = O2C, CO2, O, NHCONH, etc.; W = W1AW2; A = bond, EG; E = bond, O, S; G = (un)substituted carbocyclic or heterocyclic ring; W1,W2 = bond, alkylene, etc.; n = 1-3] were prepared, e.g., for treating/preventing complications of diabetes, age-related disease, and diseases caused by peroxidized

fat. Thus, 2-[6-methoxymethoxy-2,5,7,8-tetramethyl-3,4-dihydro-2H-benzo[1,2-b]pyran-2-yl]ethanol (preparation given) was stirred 1 h at 60° with NaH in DMSO after which 4-ClC6H4NO2 was added and stirring continued 2 h at room temperature to give benzopyranylethyl Ph ether II (R3 = MeOCH2, R10 = NO2, m = 2) which was converted in 2 steps to II (R3 = H, R10 = NH2, m = 2). The latter was converted to its hydrochloride which was stirred 1 day at 80° with H2NCN in aqueous EtOH to give II.HCl [R3 = H, R10 = NHC(:NH)NH2, m = 2]. II.HCl [R3 = H, R10 = 4-[H2NC(:NH)NH]C6H4SCH2CH2, m = 4] had IC50 of 0.0042 mM for inhibition of the Maillard reaction between lysozyme and fructose.

IT 132768-94-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as Maillard reaction inhibitor and antioxidant)

RN 132768-94-6 ZCAPLUS

CN Guanidine, N-[4-[[6-(3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl-2H-1-benzopyran-2-yl)hexyl]oxy]phenyl]-, hydrochloride (1:1) (CA INDEX NAME)



OS.CITING REF COUNT: 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS RECORD (19 CITINGS)

L15 ANSWER 18 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1990:584220 ZCAPLUS Full-text

DOCUMENT NUMBER: 113:184220

ORIGINAL REFERENCE NO.: 113:30979a,30982a

TITLE: Novel 6-hydroxychroman-2-carbonitrile inhibitors of membrane peroxidative injury

AUTHOR(S): Janero, David A.; Cohen, Noal; Burghardt, Barbara; Schaer, Beatrice H.

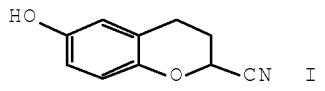
CORPORATE SOURCE: Dep. Pharmacol. Chemother., Hoffmann-La Roche Inc., Nutley, NJ, 07110-1199, USA

SOURCE: Biochemical Pharmacology (1990), 40(3), 551-8
CODEN: BCPCA6; ISSN: 0006-2952

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



I

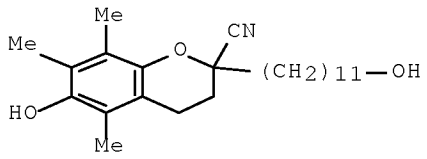
AB Novel 6-hydroxychroman-2-carbonitrile (I) compds. have been synthesized, and their antiperoxidant activity against superoxide-dependent, iron-promoted myocardial phospholipid peroxidn. has been evaluated quant. With few exceptions, these compds.

afforded significant, concentration-dependent antiperoxidant protection to myocardial-membrane phospholipid at sub- to low-micromolar concns. Structure-activity correlation demonstrated that R1-, R2-, and R3-Me groups in the aromatic ring enhanced antiperoxidant activity, whereas hydrophobic groups at either R4 or R5 of the pyran ring compromised antiperoxidant efficacy. The most efficacious antiperoxidant synthesized contained a catechol moiety at R4 and was some 10-fold more potent than α-tocopherol. None of the I antiperoxidants, scavenged superoxide or inhibited the enzymic superoxide generator, xanthine oxidase, at effective antiperoxidant concns. The ability of these compds. to interrupt the propagatory phase of an on-going peroxidn. reaction indicated that they acted as antiperoxidants by trapping chain-carrying lipid perooxyl radicals. Since a number of the I were more potent antiperoxidants than a variety of known chain-breaking compds., this new class of phenolic antioxidants may represent a novel approach to the design of therapeutics against diseases in which lipid peroxidn. is a causative factor or in which lipid peroxidases serve as mediators.

IT 130091-48-4
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(antiperoxidant activity of, structure in relation to)

RN 130091-48-4 ZCAPLUS

CN 2H-1-Benzopyran-2-carbonitrile, 3,4-dihydro-6-hydroxy-2-(11-hydroxyundecyl)-5,7,8-trimethyl- (CA INDEX NAME)



OS.CITING REF COUNT: 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)

L15 ANSWER 19 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1987:138667 ZCAPLUS Full-text

DOCUMENT NUMBER: 106:138667

ORIGINAL REFERENCE NO.: 106:22637a,22640a

TITLE: Synthesis of carbon-13 labeled vitamin E and interaction between vitamin E and phospholipid in liposome

AUTHOR(S): Urano, Shiro; Matsuo, M.

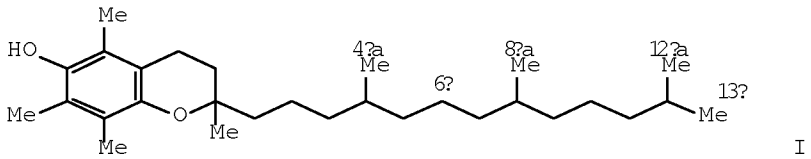
CORPORATE SOURCE: Tokyo Metrop. Inst. Gerontol., Tokyo, 173, Japan

SOURCE: Synth. Appl. Isot. Labeled Compd. Proc. Int. Symp., 2nd (1986), Meeting Date 1985, 517-18. Editor(s): Muccino, Richard Robert. Elsevier: Amsterdam, Neth. CODEN: 55BUAT

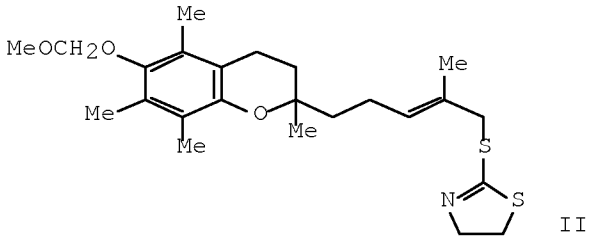
DOCUMENT TYPE: Conference

LANGUAGE: English

GI



I



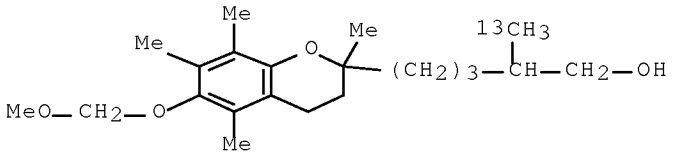
II

AB Vitamin E with a 13C-labeled isoprenoid side chain, [4'a-13C], [6'-13C], [8'a-13C] and [12'a and 13'-13C]α-tocopherols (I) were synthesized using II chroman as a key intermediate. These 13C-labeled compds. were incorporated into three kinds of lecithin liposomes from dipalmitoyl phosphatidylcholine, egg lecithin and rat liver lecithin, of which arachiodonic acid contents are 0, 2.6 and 19.0%, resp. T1 values, which were measured by NMR for the labeled carbons, indicate that the segmental motion tends to increase with the increase of the distance from the chroman ring. This tendency is not affected with the arachidonic acid contents of phospholipids. This result can not be explained by Lucy's hypothesis.

IT 103740-72-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as intermediate for labeled tocopherol)

RN 103740-72-3 ZCAPLUS

CN 2H-1-Benzopyran-2-pentanol, 3,4-dihydro-6-(methoxymethoxy)-2,5,7,8-tetramethyl-β-(methyl-13C)- (9CI) (CA INDEX NAME)



L15 ANSWER 20 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1986:479192 ZCAPLUS Full-text

DOCUMENT NUMBER: 105:79192

ORIGINAL REFERENCE NO.: 105:12857a,12860a

TITLE: Synthesis of carbon-13 labeled vitamin E, [4'a-13C]all-rac-α-tocopherol

AUTHOR(S): Urano, Shiro; Muto, Riko; Matsuo, Mitsuyoshi

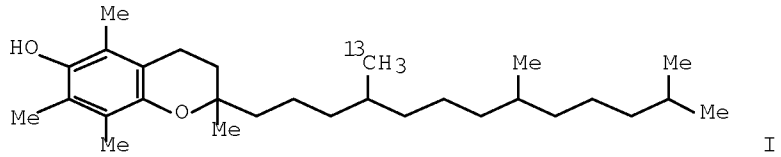
CORPORATE SOURCE: Tokyo Metrop. Inst. Gerontol., Tokyo, 173, Japan

SOURCE: Journal of Labelled Compounds and Radiopharmaceuticals (1985), 22(8), 775-85
CODEN: JLCRD4; ISSN: 0362-4803

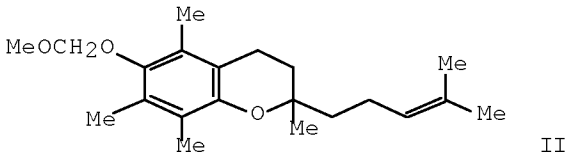
DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 105:79192
GI

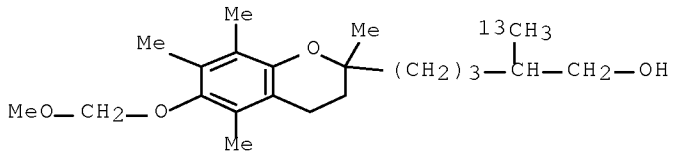


I



II

AB The labeled α-tocopherol I was prepared from chroman II.
IT 103740-72-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as intermediate for labeled tocopherol)
RN 103740-72-3 ZCAPLUS
CN 2H-1-Benzopyran-2-pentanol, 3,4-dihydro-6-(methoxymethoxy)-2,5,7,8-tetramethyl-β-(methyl-13C)- (9CI) (CA INDEX NAME)



L15 ANSWER 21 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1981:514902 ZCAPLUS Full-text
DOCUMENT NUMBER: 95:114902
ORIGINAL REFERENCE NO.: 95:19265a,19268a
TITLE: Cyclohexanecarboxylic acid derivatives and an agent containing them
INVENTOR(S): Muramatsu, Mutsumi; Satoh, Toshio; Yanagimoto, Yukio; Shinuchi, Tadami; Nakajima, Toshio; Nakajima, Isao
PATENT ASSIGNEE(S): Nippon Chemiphar Co., Ltd., Japan
SOURCE: Ger. Offen., 68 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3035086	A1	19810409	DE 1980-3035086	19800917
DE 3035086	C2	19910103		

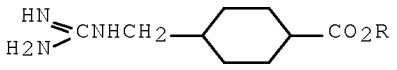
JP 56045454	A	19810425	JP 1979-120142	19790920
JP 63024988	B	19880523		
JP 56092260	A	19810725	JP 1979-168271	19791226
JP 63024994	B	19880523		
JP 56092261	A	19810725	JP 1979-168272	19791226
JP 63001940	B	19880114		
SE 8006365	A	19810321	SE 1980-6365	19800911
SE 460667	B	19891106		
SE 460667	C	19900301		
AU 8062320	A	19810326	AU 1980-62320	19800911
AU 541738	B2	19850117		
US 4348410	A	19820907	US 1980-186849	19800915
BE 885263	A1	19810116	BE 1980-202125	19800917
GB 2058773	A	19810415	GB 1980-30183	19800918
GB 2058773	B	19830323		
DK 8003968	A	19810321	DK 1980-3968	19800919
DK 163580	B	19920316		
DK 163580	C	19920803		
NL 8005238	A	19810324	NL 1980-5238	19800919
FR 2472561	A1	19810703	FR 1980-20263	19800919
FR 2472561	B1	19850531		
CA 1142943	A1	19830315	CA 1980-360655	19800919
HU 28808	A2	19831228	HU 1980-2308	19800919
HU 184828	B	19841029		
AT 8004706	A	19840215	AT 1980-4706	19800919
AT 375918	B	19840925		
CH 646687	A5	19841214	CH 1980-7064	19800919
IN 151297	A1	19830326	IN 1980-CA1071	19800920
BR 8006052	A	19810407	BR 1980-6052	19800923
IN 155437	A1	19850202	IN 1982-CA1514	19821231

PRIORITY APPLN. INFO.:

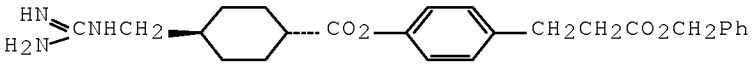
JP 1979-120142	A	19790920
JP 1979-168271	A	19791226
JP 1979-168272	A	19791226
IN 1980-CA1071	A1	19800920

OTHER SOURCE(S): MARPAT 95:114902

GI



I



II

AB I [R = vanillyl, naphthyl, pyridyl, tocopheryl, or C6H4R1 [R1 = H, alkoxy, Ph, etc., or (CH2)nCO2R2 (R2 = alkyl, Ph, benzyl etc.)]] were prepared, and in some cases extensively tested, as antiulcer agents. Thus, 7.1 g trans-4-(guanidinomethyl)cyclohexanecarboxylic acid-HCl, 8.5 g 4-HOC6H4CH2CH2CO2CH2Ph, and 7.2 g DCC in 75 mL pyridine were stirred 15 h at 25° to give 92.1% II.

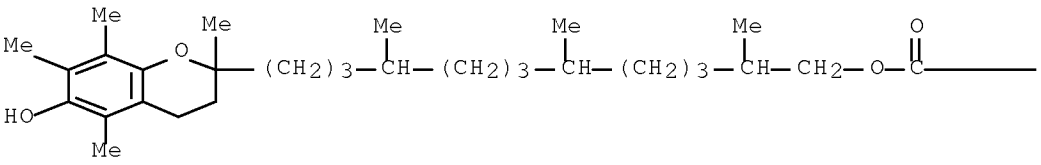
IT 78940-06-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 78940-06-4 ZCAPLUS

CN Cyclohexanecarboxylic acid, 4-[[(aminoiminomethyl)amino]methyl]-, 13-(3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl-2H-1-benzopyran-2-yl)-2,6,10-trimethyltridecyl ester, monohydrochloride, stereoisomer (9CI) (CA INDEX

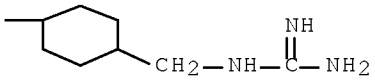
NAME)

PAGE 1-A



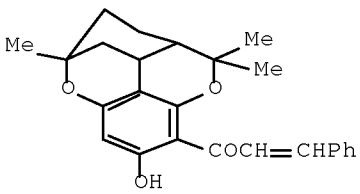
● HCl

PAGE 1-B



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L15 ANSWER 22 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1978:563773 ZCAPLUS Full-text
DOCUMENT NUMBER: 89:163773
ORIGINAL REFERENCE NO.: 89:25389a,25392a
TITLE: The chemistry of Brazilian Lauraceae. Part 49. (-)-Rubranine from Aniba rosaedora
AUTHOR(S): De Alleluia, Irene B.; Braz Fo, Raimundo; Gottlieb, Otto R.; Magalhaes, Eva G.; Marques, Raquel
CORPORATE SOURCE: Inst. Cienc. Exatas, Univ. Fed. Rural, Rio de Janeiro, Brazil
SOURCE: Phytochemistry (Elsevier) (1978), 17(3), 517-21
CODEN: PYTCAS; ISSN: 0031-9422
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

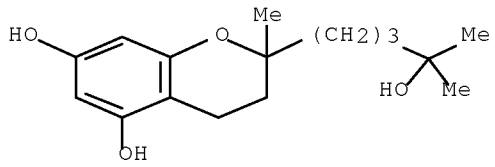


I

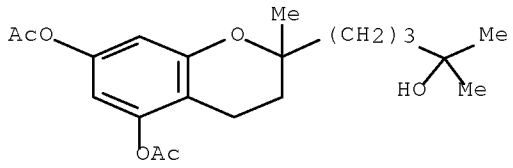
AB (-)-Rubranin (I) was isolated from Aniba rosaeodora; optically inactive I is not an artifact of extraction as previously reported by F. Winternitz et al. (1970). The structure of I was confirmed by chemical data. Condensation reactions of geraniol with pinocembrin, phloroglycinol, and phloroacetophenone showed that the formation of I involves condensation of geranyl pyrophosphate or a linalool derivative, with a phloroglucinol system.

IT 67832-00-2P 67832-01-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 67832-00-2 ZCAPLUS
CN 2H-1-Benzopyran-5,7-diol, 3,4-dihydro-2-(4-hydroxy-4-methylpentyl)-2-methyl- (CA INDEX NAME)



RN 67832-01-3 ZCAPLUS
CN 2H-1-Benzopyran-5,7-diol, 3,4-dihydro-2-(4-hydroxy-4-methylpentyl)-2-methyl-, 5,7-diacetate (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L15 ANSWER 23 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER:	1978:547095 ZCAPLUS Full-text
DOCUMENT NUMBER:	89:147095
ORIGINAL REFERENCE NO.:	89:22809a,22812a
TITLE:	Synthesis of (2R,4'R,8'R)-α-tocopheryl acetate (vitamin E acetate) using [3,3] sigmatropic rearrangement
AUTHOR(S):	Chan, Ka-Kong; Specian, Anthony C., Jr.; Saucy, Gabriel
CORPORATE SOURCE:	Chem. Res. Dep., Hoffmann-La Roche Inc., Nutley, NJ, USA
SOURCE:	Journal of Organic Chemistry (1978), 43(18), 3435-40 CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE:	Journal
LANGUAGE:	English

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

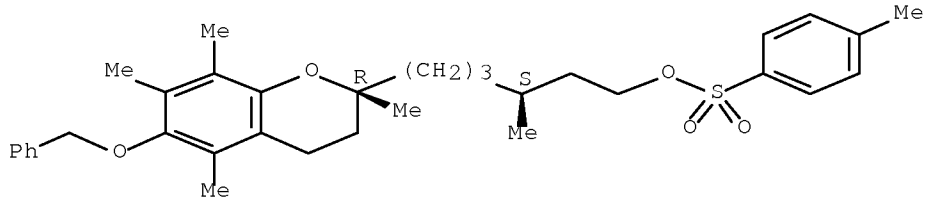
AB A new synthesis of (2R,4'R,8'R)-α-tocopheryl acetate (I; R = Ac) was achieved by the application of stereoselective [3,3] sigmatropic (Claisen) rearrangement. Treatment of the (S)-chromanylacetaldehyde II with MeC.tplbond.CMgBr gave 2 diastereomeric acetylenic carbinols, (R)-III and (S)-III (.apprx.2:1). Orthoester Claisen rearrangement of allylic alcs. (R,E)- and (S,Z)-IV, resp., yielded the same unsatd. ester, (R,E)-V with essentially complete chiral transmission. The ester V was converted into the tosylate VI by standard transformations. Coupling of VI with the (R)-BrCH2CHMe(CH2)3CHMe2 furnished tocopheryl benzyl ether I (R = PhCH2). Hydrogenation of I (R = PhCH2) followed by acetylation then gave I (R = Ac) (vitamin E acetate). The complete transfer of chirality from (R,E)-IV and (S,Z)-IV to (R,E)-V demonstrates wide potential applicability of this [3,3] sigmatropic process in the synthesis of optically active substances.

IT 64705-02-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and Grignard reaction of, with dimethylbromoheptane)

RN 64705-02-8 ZCAPLUS

CN 2H-1-Benzopyran-2-hexanol, 3,4-dihydro-γ,2,5,7,8-pentamethyl-6-(phenylmethoxy)-, 4-methylbenzenesulfonate, [R-(R*,S*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

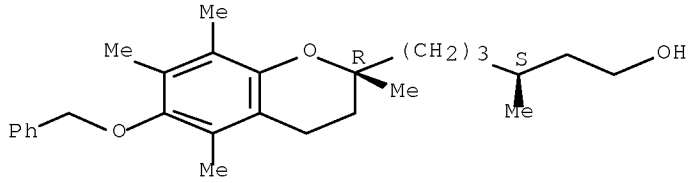


IT 64705-01-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and tosylation of)

RN 64705-01-7 ZCAPLUS

CN 2H-1-Benzopyran-2-hexanol, 3,4-dihydro-γ,2,5,7,8-pentamethyl-6-(phenylmethoxy)-, (γS,2R)- (CA INDEX NAME)

Absolute stereochemistry.



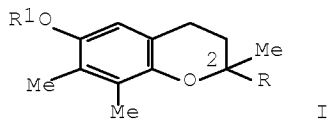
OS.CITING REF COUNT: 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS

RECORD (11 CITINGS)

L15 ANSWER 24 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1978:38000 ZCAPLUS Full-text
DOCUMENT NUMBER: 88:38000
ORIGINAL REFERENCE NO.: 88:5976h,5977a
TITLE: Asymmetric synthesis of vitamin E
INVENTOR(S): Chan, Ka-Kong; Saucy, Gabriel
PATENT ASSIGNEE(S): Hoffmann-La Roche, Inc., USA
SOURCE: U.S., 11 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 4029678	A	19770614	US 1975-638382		19751208
NL 7613044	A	19770610	NL 1976-13044		19761123
JP 52071472	A	19770614	JP 1976-145715		19761206
DE 2655174	A1	19770616	DE 1976-2655174		19761206
GB 1561548	A	19800220	GB 1976-50981		19761207
FR 2357554	A1	19780203	FR 1976-36962		19761208
FR 2357554	B1	19800328			
US 4093632	A	19780606	US 1977-770542		19770222
US 4094885	A	19780613	US 1977-770336		19770222
US 4097495	A	19780627	US 1977-770540		19770222
US 4100175	A	19780711	US 1977-777808		19770315
PRIORITY APPLN. INFO.:			US 1975-544153	A2	19750127
			US 1975-638382	A	19751208

OTHER SOURCE(S): MARPAT 88:38000
GI



I

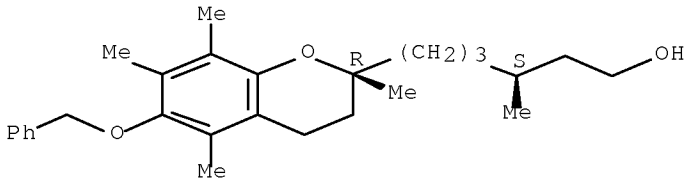
AB (2R,4'R,8'R)-α-tocophenyl acetate [I, R = (CH2)3CHMe(CH2)3CHMe(CH2)3CHMe2, R1 = Ac] was obtained in 10 steps from I (R = CH2CHO, R1 = PhCH2) by Grignard reaction with MeC.tplbond.CMgBr, hydrogenation, condensation-rearrangement with MeCH(OEt)3 and EtCO2H to give I (R = CH2CH:CHCHMeCH2CO2Et, R1 = PhCH2O), hydrogenation, saponification, reduction with Na[Al(OCH2CH2OMe)2H2] to give I [R = (CH2)3CHMeCH2CH2OH], esterification by p-MeC6H4SO2Cl, Grignard reaction with Me2CH(CH2)3CHMeCH2MgBr, debenzylation, and acetylation.

IT 64705-01-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and esterification by p-toluenesulfonyl chloride)

RN 64705-01-7 ZCAPLUS

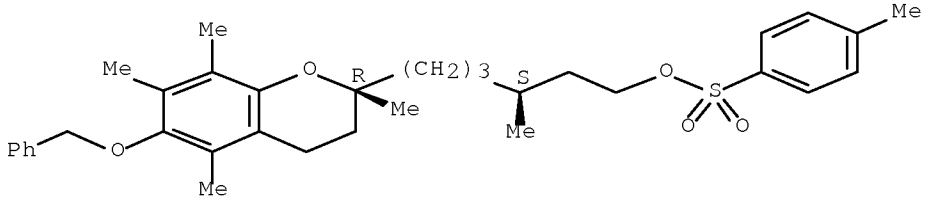
CN 2H-1-Benzopyran-2-hexanol, 3,4-dihydro-γ,2,5,7,8-pentamethyl-6-(phenylmethoxy)-, (γS,2R)- (CA INDEX NAME)

Absolute stereochemistry.



IT 64705-02-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with (dimethylheptyl)magnesium bromide)
RN 64705-02-8 ZCAPLUS
CN 2H-1-Benzopyran-2-hexanol, 3,4-dihydro-γ,2,5,7,8-pentamethyl-6-(phenylmethoxy)-, 4-methylbenzenesulfonate, [R-(R*,S*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



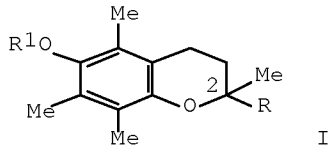
OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L15 ANSWER 25 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1978:7123 ZCAPLUS Full-text
DOCUMENT NUMBER: 88:7123
ORIGINAL REFERENCE NO.: 88:1213a,1216a
TITLE: Synthesis of vitamin E
INVENTOR(S): Chan, Ka-Kong; Saucy, Gabriel
PATENT ASSIGNEE(S): Hoffmann-La Roche, Inc., USA
SOURCE: U.S., 12 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4016178	A	19770405	US 1975-587570	19750617
CH 618695	A5	19800815	CH 1976-325	19760113
DE 2602509	A1	19760729	DE 1976-2602509	19760123
NL 7600707	A	19760729	NL 1976-707	19760123
JP 51100082	A	19760903	JP 1976-6731	19760126
FR 2313385	B1	19790427	FR 1976-1974	19760126
GB 1488461	A	19771012	GB 1976-3079	19760127
US 4076739	A	19780228	US 1976-747111	19761208
US 4086249	A	19780425	US 1976-746988	19761208

US 4088662	A	19780509	US 1976-746987		19761208
US 4110346	A	19780829	US 1976-746982		19761208
PRIORITY APPLN. INFO.:			US 1975-544163	A	19750127
			US 1975-587570	A	19750617

OTHER SOURCE(S): MARPAT 88:7123
GI



I

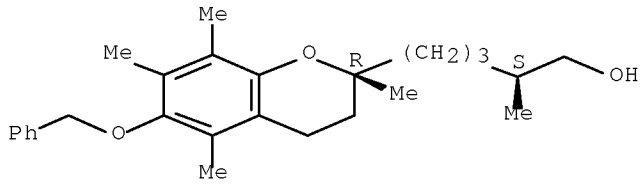
AB (2R,4'R,8'R)-α-tocopherol [I, R = (CH2)3CHMe(CH2)3CHMe(CH2)3CHMe2, R1 = H] was prepared in 7 steps from I [R = CH2CH(OH)CH:CHMe, R1 = PhCH2] by condensation-rearrangement with Me2NCH(OMe)2, hydrogenation, hydrolysis to give I [R = (CH2)3CHMeCO2H, R1 = PhCH2], reduction, tosylation to give I [R = (CH2)3CHMeCH2OSO2C6H4Me-4] which was treated with Me2CH(CH2)3CHMeCH2CH2MgBr followed by hydrogenolysis of the benzyl group.

IT 60919-77-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and esterification by p-toluenesulfonyl chloride)

RN 60919-77-9 ZCAPLUS

CN 2H-1-Benzopyran-2-pentanol, 3,4-dihydro-β,2,5,7,8-pentamethyl-6-(phenylmethoxy)-, [R-(R*,S*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

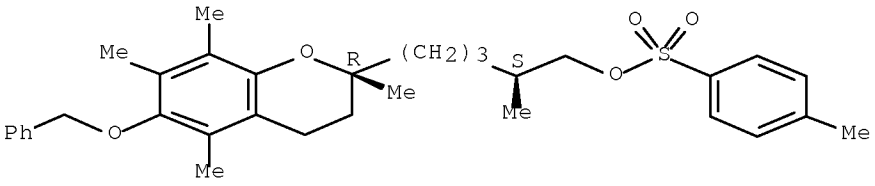


IT 60919-73-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with dimethyloctylmagnesium bromide)

RN 60919-73-5 ZCAPLUS

CN 2H-1-Benzopyran-2-pentanol, 3,4-dihydro-β,2,5,7,8-pentamethyl-6-(phenylmethoxy)-, 4-methylbenzenesulfonate, [R-(R*,S*)]- (9CI) (CA INDEX NAME)

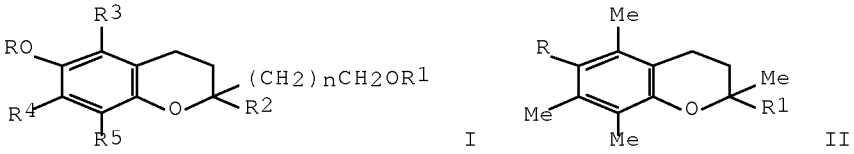
Absolute stereochemistry.



L15 ANSWER 26 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1977:584732 ZCAPLUS Full-text
DOCUMENT NUMBER: 87:184732
ORIGINAL REFERENCE NO.: 87:29191a,29194a
TITLE: Antioxidant chroman compounds
INVENTOR(S): Scott, John William; Parrish, David Richard; Saucy, Gabriel
PATENT ASSIGNEE(S): Hoffmann-La Roche, Inc., USA
SOURCE: U.S., 31 pp. Division of U.S. 3,947,473.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4026907	A	19770531	US 1975-637548	19751204
US 3947473	A	19760330	US 1973-417465	19731119
CH 622257	A5	19810331	CH 1976-14579	19761119
PRIORITY APPLN. INFO.:			US 1972-317566 A2	19721222
			US 1973-417465 A3	19731119
			CH 1973-17771 A	19731219

GI

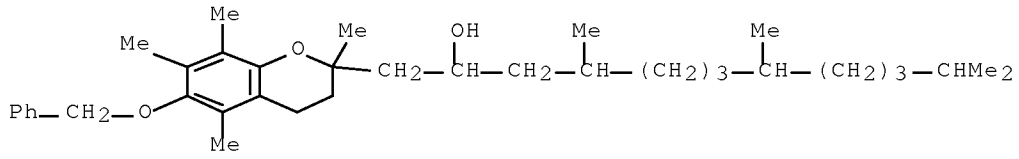


I II

AB Chroman derivs. I (R, R1 = H, PhCH2, Ph2CH, Ph3C, alkoxy, alkyl, tetrahydropyranyl, acyl; R2 = H, alkyl, Ph; R3, R4, R5 = H, alkyl, n = 0,1) useful as antioxidants for oils, fats, and waxes and as intermediates in the preparation of optically active tocopherols, were prepared Thus, II (R = AcO, R1 = OH), prepared by condensation of trimethyl hydroquinone, (MeO)3CH, and MeCOCH:CH2, followed by acetylation and demethylation, was treated with (MeO)2P(O)CH2CO2Me and saponified to give II (R = HO, R1 = CH2CO2H). Acetylation of the latter followed by chlorination gave the acid chloride which was reduced to the aldehyde II (R = AcO, R1 = CH2CHO). The (±)-aldehyde treated with (±)-BrCH2CHMe(CH2)3CHMe(CH2)3CHMe2 gave 2RS,4'RS,8'RS-2',3'-dehydro-α-tocopheryl acetate, which was hydrogenated to the racemic α-tocopheryl acetate.

IT 62777-87-1P
RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)
RN 62777-87-1 ZCAPLUS
CN 2H-1-Benzopyran-2-ethanol, 3,4-dihydro-2,5,7,8-tetramethyl-6-(phenylmethoxy)-α-(2,6,10-trimethylundecyl)-, [2R*(2S*,4S*,8S*)]-(9CI) (CA INDEX NAME)

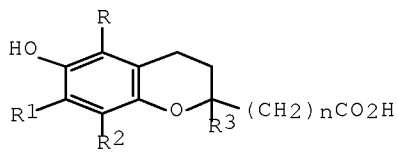


OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

L15 ANSWER 27 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1977:468154 ZCAPLUS Full-text
DOCUMENT NUMBER: 87:68154
ORIGINAL REFERENCE NO.: 87:10845a,10848a
TITLE: Antioxidant chroman compounds
INVENTOR(S): Scott, John William; Parrish, David Richard; Saucy, Gabriel
PATENT ASSIGNEE(S): Hoffmann-La Roche, Inc., USA
SOURCE: U.S., 30 pp. Division of U.S. 3,947,473.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 4018799	A	19770419	US 1975-637611		19751204
US 3947473	A	19760330	US 1973-417465		19731119
CH 622257	A5	19810331	CH 1976-14579		19761119
PRIORITY APPLN. INFO.:			US 1972-317566	A2	19721222
			US 1973-417465	A3	19731119
			CH 1973-17771	A	19731219

GI

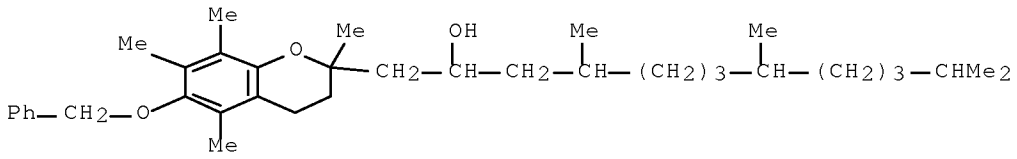


I

AB Chromanacetic and -carboxylic acids (I; R, R1, R2 = sep. H or alkyl; R3 = H, alkyl, Ph; n = 0 or 1), as racemates or optical anti podes, which showed antioxidant activity by inhibiting development of rancidity in fats and oils and are intermediates for the preparation of α-tocopherol, were prepared by standard methods. Thus, trimethylhydroquinone was treated with HC(OMe)3 and CH2:CHCOMe in

the presence of H2SO4, the resultant (±)-2-methoxy-2,5,7,8-tetramethyl-6-chromanol was acetylated, the MeO group hydrolyzed, and treated with (MeO)2PCH2CO2Me and NaH to give the Me ester acetate of I (R = R1 = R2 = R3 = Me, n = 1) (II), which was then converted to II by alkaline hydrolysis. Chicken fat with added II did not become rancid for 16 days, compared to 3 days with no additive.

IT 62777-87-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 62777-87-1 ZCAPLUS
CN 2H-1-Benzopyran-2-ethanol, 3,4-dihydro-2,5,7,8-tetramethyl-6-(phenylmethoxy)-α-(2,6,10-trimethylundecyl)-, [2R*(2S*,4S*,8S*)]-(9CI) (CA INDEX NAME)

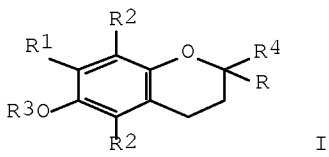


OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L15 ANSWER 28 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1977:190279 ZCAPLUS Full-text
DOCUMENT NUMBER: 86:190279
ORIGINAL REFERENCE NO.: 86:29857a,29860a
TITLE: Antioxidant chroman compounds
INVENTOR(S): Scott, John William; Parrish, David R.; Saucy, Gabriel
PATENT ASSIGNEE(S): Hoffmann-La Roche, Inc., USA
SOURCE: U.S., 31 pp. Division of U.S. 3,947,473.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 4003919	A	19770118	US 1975-637547		19751204
US 3947473	A	19760330	US 1973-417465		19731119
CH 622257	A5	19810331	CH 1976-14579		19761119
PRIORITY APPLN. INFO.:			US 1972-317566	A2	19721222
			US 1973-417465	A3	19731119
			CH 1973-17771	A	19731219

GI



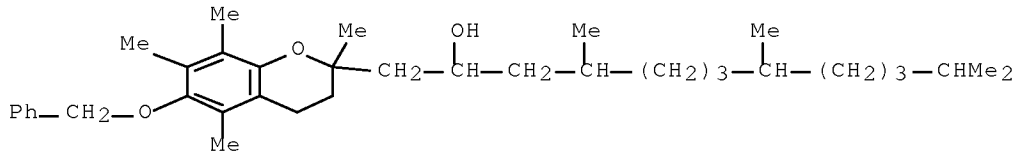
I

AB About 80 antioxidant (no data) racemic or optically active chroman derivs. [I, R = Me, Et, Ph, H; R1 = Me, Me3C; R2 = Me, H; R3 = H, PhCH2, Ac; R4 = OH, OMe, CN, CO2H, CH2CHO, CHO, CO2Me, CO2Et, (CH2)3CHMe(CH2)3CHMe(CH2)3CHMe2; or their 3,4-dihydro derivs.] were prepared, e.g., by condensing trimethylhydroquinone (II) with MeCOCH:CH2 or its analogs. Thus, 304.4 g II in MeOH containing HC(OMe)3 and H2SO4 was treated with 340 ml MeCOCH:CH2 to give I (R-R2 = Me, R3 = H, R4 = OMe) (no yield given).

IT 62777-87-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 62777-87-1 ZCAPLUS

CN 2H-1-Benzopyran-2-ethanol, 3,4-dihydro-2,5,7,8-tetramethyl-6-(phenylmethoxy)-α-(2,6,10-trimethylundecyl)-, [2R*(2S*,4S*,8S*)]-(9CI) (CA INDEX NAME)

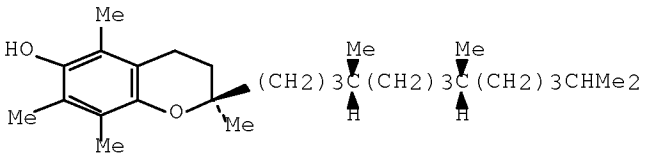


OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)

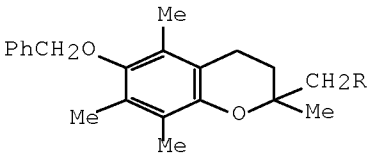
L15 ANSWER 29 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1977:55601 ZCAPLUS Full-text
DOCUMENT NUMBER: 86:55601
ORIGINAL REFERENCE NO.: 86:8873a,8876a
TITLE: (2R,4'R,8'R)-d-Tocopherol and acetate
INVENTOR(S): Cohen, Noal; Saucy, Gabriel; Chan, Ka-Kong
PATENT ASSIGNEE(S): Hoffmann-La Roche, F., und Co., A.-G., Switz.
SOURCE: Ger. Offen., 19 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
DE 2602509	A1	19760729	DE 1976-2602509		19760123
US 4016178	A	19770405	US 1975-587570		19750617
US 4151205	A	19790424	US 1977-802747		19770602
US 4191842	A	19800304	US 1979-4102		19790117
PRIORITY APPLN. INFO.:			US 1975-544163	A	19750127
			US 1975-587570	A	19750617
			US 1975-639011	A3	19751209
			US 1977-802747	A3	19770602

OTHER SOURCE(S): MARPAT 86:55601
GI



I



II, R=CO_2Me
III, R=CH_2OH

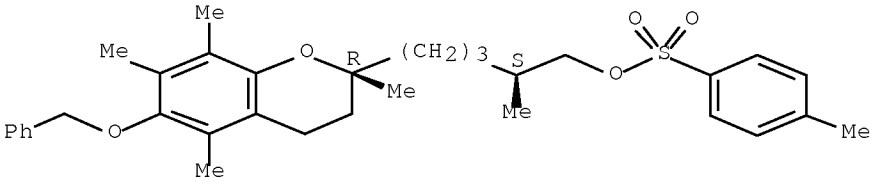
AB Tocopherol I was prepared by 2 methods. Thus, chromanacetate (S)-(-)-II in C6H6 was reduced with NaAl(OCH2CH2OMe)2H to the alc. III, which was sulfonated with MeSO2Cl and the product methanesulfonate-treated with (2R,6R)-(-)-Me2CH(CH2)3CHMe(CH2)3CHMeCH2MgBr, then Li2CuCl4 to give I benzyl ether, which was hydrogenolyzed to give I, characterized as the acetate. I was also prepared in 7 steps from 2(S)-[2(S)-hydroxy-3(Z)-pentenyl]-2,5,7,8-tetramethyl-6-(benzyloxy)chroman and DMF via 5-[2(R)-6-(benzyloxy)-2,5,7,8-tetramethyl-2-chromanyl]-2(S)- methylpentyl p-toluenesulfonate.

IT 60919-73-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and Grignard reaction with dimethyloctyl bromide)

RN 60919-73-5 ZCAPLUS

CN 2H-1-Benzopyran-2-pentanol, 3,4-dihydro-β,2,5,7,8-pentamethyl-6-(phenylmethoxy)-, 4-methylbenzenesulfonate, [R-(R*,S*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

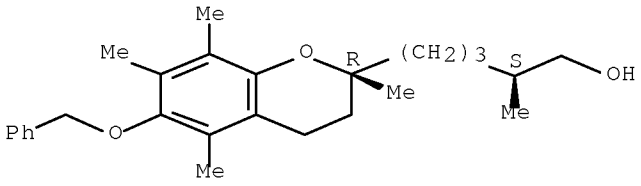


IT 60919-77-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(tosylation of)

RN 60919-77-9 ZCAPLUS

CN 2H-1-Benzopyran-2-pentanol, 3,4-dihydro-β,2,5,7,8-pentamethyl-6-(phenylmethoxy)-, [R-(R*,S*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 30 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1976:576850 ZCAPLUS Full-text
DOCUMENT NUMBER: 85:176850
ORIGINAL REFERENCE NO.: 85:28247a,28250a
TITLE: Aliphatic carbonyl compounds
INVENTOR(S): Chan, Ka-Kong; Saucy, Gabriel
PATENT ASSIGNEE(S): Hoffmann-La Roche, F., und Co., A.-G., Switz.
SOURCE: Ger. Offen., 41 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2602508	A1	19760729	DE 1976-2602508	19760123
US 4000169	A	19761228	US 1975-544153	19750127
NL 7600807	A	19760729	NL 1976-807	19760127
JP 51100012	A	19760903	JP 1976-7194	19760127
GB 1510053	A	19780510	GB 1976-3081	19760127
FR 2399402	A1	19790302	FR 1976-2162	19760127

PRIORITY APPLN. INFO.: US 1975-544153 A 19750127

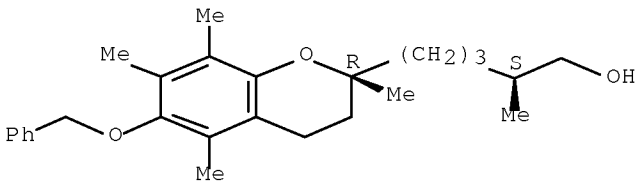
AB RCOCH2CHMeCH:CH(CH2CHMeCH2CH2)nCHR1CR2Me2 I (R = H, OH, NMe2, OMe, etc.; R1R2 = H, bond; n = 0, 1) were prepared by the reaction of an unsatd. alc. with MeC(OR)2R1 (R = Me, Et; R1 = OR, NMe2) or a vinyl alkyl ether. Thus, R-cis-MeCH:CHCH(OH)CH2CHMe2 was refluxed with MeC(OEt)3 in EtCO2H with distillation of EtOH to give S-trans-EtO2CCH2CHMeCH:CHCH2CHMe2. I are useful for the preparation of tocopherol derivs.

IT 60919-77-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and tosylation of)

RN 60919-77-9 ZCAPLUS

CN 2H-1-Benzopyran-2-pentanol, 3,4-dihydro-β,2,5,7,8-pentamethyl-6-(phenylmethoxy)-, [R-(R*,S*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



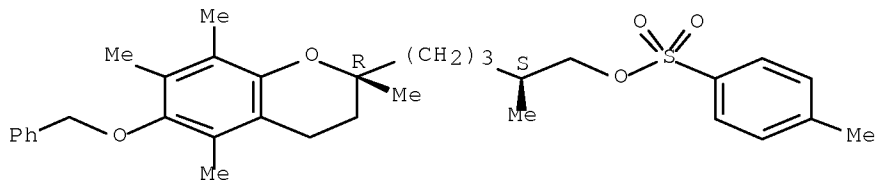
IT 60919-73-5

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with dimethyloctylmagnesium bromide)

RN 60919-73-5 ZCAPLUS

CN 2H-1-Benzopyran-2-pentanol, 3,4-dihydro-β,2,5,7,8-pentamethyl-6-(phenylmethoxy)-, 4-methylbenzenesulfonate, [R-(R*,S*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L15 ANSWER 31 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1974:569670 ZCAPLUS Full-text
DOCUMENT NUMBER: 81:169670
ORIGINAL REFERENCE NO.: 81:26263a,26266a
TITLE: Chromane derivatives
INVENTOR(S): Saucy, Gabriel; Scott, John William; Parrish, David R.
PATENT ASSIGNEE(S): Hoffmann-La Roche, F., und Co., A.-G.
SOURCE: Ger. Offen., 83 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2364165	A1	19740627	DE 1973-2364165	19731221
ZA 7309471	A	19740828	ZA 1973-9471	19731213
CH 603617	A5	19780831	CH 1973-17771	19731219
CH 605892	A5	19781013	CH 1973-17770	19731219
DD 109624	A5	19741112	DD 1973-175557	19731220
BE 808942	A1	19740621	BE 1973-139128	19731221
BE 808943	A1	19740621	BE 1973-139129	19731221
NL 7317587	A	19740625	NL 1973-17587	19731221
NL 7317590	A	19740625	NL 1973-17590	19731221
NL 178968	B	19860116		
NL 178968	C	19860616		
JP 49088876	A	19740824	JP 1973-142526	19731221
JP 49088877	A	19740824	JP 1973-142527	19731221
JP 59046233	B	19841110		
FR 2255299	A1	19750718	FR 1973-46001	19731221
HU 168043	B	19760228	HU 1973-HO1637	19731221
FR 2284604	A1	19760409	FR 1973-46000	19731221
FR 2284604	B1	19790511		
AT 7310769	A	19760415	AT 1973-10769	19731221
AT 333755	B	19761210		
SU 518135	A3	19760615	SU 1973-1978253	19731221
GB 1456827	A	19761124	GB 1973-59296	19731221

GB 1456828	A	19761124	GB 1973-59298	19731221
GB 1456829	A	19761124	GB 1975-22271	19731221
GB 1456830	A	19761124	GB 1975-22272	19731221
CA 1022562	A1	19771213	CA 1973-188762	19731221
SE 406912	B	19790305	SE 1973-17421	19731221
SE 406912	C	19790614		
AU 7364009	A	19750703	AU 1973-64009	19731228
CH 622257	A5	19810331	CH 1976-14579	19761119
JP 59144780	A	19840818	JP 1984-5854	19840118
JP 60026795	B	19850625		

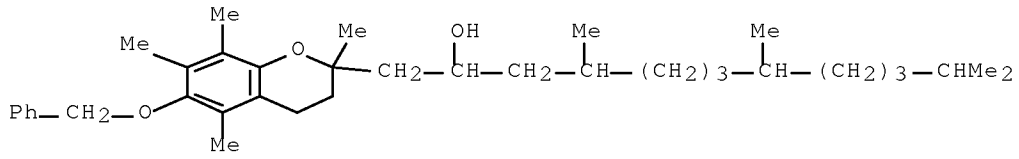
PRIORITY APPLN. INFO.: US 1972-317566 A 19721222
CH 1973-17771 A 19731219

AB (2R,4'R,8'R)-, (4R,-4'RS,8'RS)-, (4RS,4'R,8'R)- and (4RS,4'RS,8'RS)-α-Tocopherol or their acetates or benzyl ethers were prepared by reacting the appropriate stereoisomers of Me2C(CH2)3CHMe(CH2)3CHMeCH2P+Me3 Br- and 6-(acyloxy)-2,5,7,8-tetramethyl-2-chromanacetaldehyde followed by hydrogenation and optional hydrolysis. E.g., (±)-6-acetoxy-2,5,7,8-tetramethyl-2-chromanacetaldehyde, obtained by hydrogenation of the corresponding acid, was treated with (2RS,6RS)-Me2C(CH2)3CHMe(CH2)3-CHMeCH2P+Me3 Br- 3 hr at 60° to give (2RS,4'RS,8'RS) -2',3'-didehydro-α-tocopherol acetate, which was hydrogenated over PtO2 to give (2RS,4'RS,8'RS)-α-tocopherol acetate.

IT 54486-03-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 54486-03-2 ZCAPLUS

CN 2H-1-Benzopyran-2-ethanol, 3,4-dihydro-2,5,7,8-tetramethyl-6-(phenylmethoxy)-α-(2,6,10-trimethylundecyl)- (CA INDEX NAME)



L15 ANSWER 32 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN

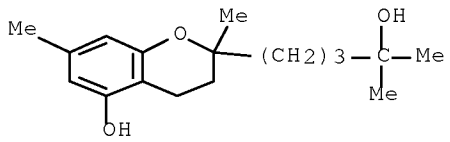
ACCESSION NUMBER: 1972:462140 ZCAPLUS Full-text
DOCUMENT NUMBER: 77:62140
ORIGINAL REFERENCE NO.: 77:10287a,10290a
TITLE: Biogenetic-type synthesis of isoprenoid and diisoprenoid derivatives of orcinol
AUTHOR(S): Manners, G.; Jurd, L.; Stevens, K.
CORPORATE SOURCE: West. Reg. Res. Lab., Agric. Res. Serv., Berkeley, CA, USA
SOURCE: Tetrahedron (1972), 28(11), 2949-59
CODEN: TETRAB; ISSN: 0040-4020
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The products formed by condensation of orcinol with 2-methyl-3-buten-2-ol, with geraniol, and with linalool in aqueous solns. of organic acids were separated and identified. C-isoprenyl- and C-geranyl orcinols are obtained as major products. Minor amts. of the hydrates, chromans, chroman hydrates, and hexahydroxanthene derivs. are also formed.

IT 38106-57-9P 38106-58-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

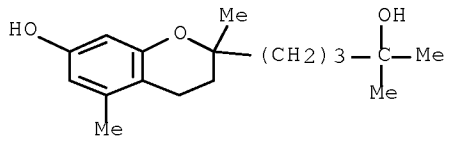
RN 38106-57-9 ZCAPLUS

CN 2H-1-Benzopyran-2-butanol, 3,4-dihydro-5-hydroxy-α,α,2,7-tetramethyl- (CA INDEX NAME)



RN 38106-58-0 ZCAPLUS

CN 2H-1-Benzopyran-2-butanol, 3,4-dihydro-7-hydroxy-α,α,2,5-tetramethyl- (CA INDEX NAME)



OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)

L15 ANSWER 33 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1969:447904 ZCAPLUS Full-text

DOCUMENT NUMBER: 71:47904

ORIGINAL REFERENCE NO.: 71:8795a,8798a

TITLE: Antioxidative activity of tocopherol derivatives with a modified side chain

AUTHOR(S): Placer, Zdenek; Weichet, J.

CORPORATE SOURCE: Inst. Ernaehrungsforsch. Prag, Prague, Czech.

SOURCE: Nahrung (1968), 12(7), 749-50
CODEN: NAHRAR; ISSN: 0027-769X

DOCUMENT TYPE: Journal

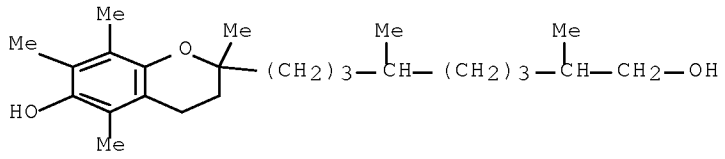
LANGUAGE: German

GI For diagram(s), see printed CA Issue.

AB The antioxidant activity of tocopherol derivs. I was compared in an emulsion of γ-linolenic acid activated with Hb to an activity of 86 nanomoles of malonic dialdehyde or in a rat liver homogenate with an activity of 63 nanomoles of malonic dialdehyde. The following results were obtained (R, R1, molar concentration required for 100% inhibition of oxidation in the emulsion and the homogenate given): (CH2CH2CH2CHMe)3Me, H, 8.1 + 10-4, 2.1 + 10-4; (CH2CH2CH2CHMe)3Me, Ac, >10-3, >10-3; (CH2CH2CH2CHMe)2CH2OH, H, 8.8 + 10-6, 4.9 + 10-6; (CH2)3 CHMeCO2H, H, 5.8 + 10-5, 3.9 + 10-6; (CH2CH2CH2CHMe)2CO2H, H, 6.5 + 10-5, 4.3 + 10-6; (CH2CH2CH2CHMe)3CO2H, H, 4.7 + 10-5, 4.8 + 10-6; (CH2)3CHMeCO2H, Ac, >10-3, 5.5 + 10-3; (CH2CH2CH2CHMe)3CO2H, Ac, >10-3, 6.2 + 10-3; (CH2)3CHMeCO2Me, H, 2 + 10-5, 4.2 + 10-6; (CH2CH2CH2CHMe)2CO2Me, H, 2.1 + 10-5, 9.7 + 10-6; (CH2CH2CH2CHMe)3CO2Me, H, 6.2 + 10-5, 8.3 + 10-5; butylated hydroxytoluene, 2.5 + 10-5, 6.8 + 10-6; Pr gallate, 6.9 + 10-5, 7.9 + 10-4.

IT 18787-09-2
RL: BAC (Biological activity or effector, except adverse); BSU (Biological

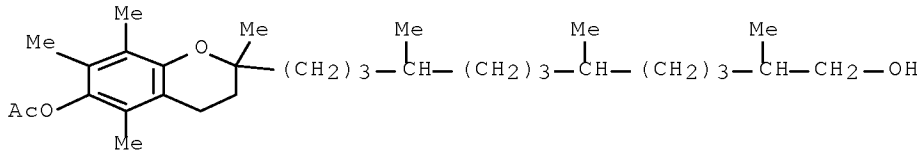
study, unclassified); BIOL (Biological study)
(antioxidant activity of)
RN 18787-09-2 ZCAPLUS
CN 2H-1-Benzopyran-2-nonanol, 3,4-dihydro-6-hydroxy-β,ζ,2,5,7,8-hexamethyl- (CA INDEX NAME)



L15 ANSWER 34 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1969:96612 ZCAPLUS Full-text
DOCUMENT NUMBER: 70:96612
ORIGINAL REFERENCE NO.: 70:18045a
TITLE: Phosphorylated chroman derivatives
INVENTOR(S): Blaha, Ludvik; Weichet, Jaroslav; Kakac, Bohumil
SOURCE: Czech., 3 pp.
CODEN: CZXXA9
DOCUMENT TYPE: Patent
LANGUAGE: Czech
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

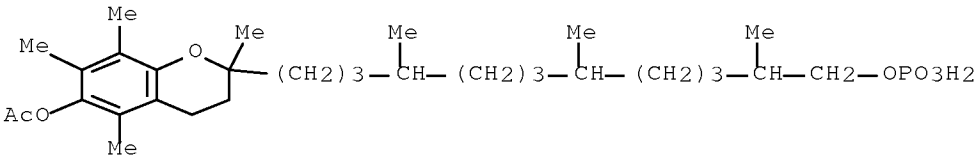
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 127991		19680615	CS	19660831

GI For diagram(s), see printed CA Issue.
AB A solution of 0.76 ml. POCl3 in 2.1 ml. dry CHCl3 was treated dropwise with stirring at 0° with 1.7 ml. dry pyridine and in 10 min. with 1 g. I (n = 3, X = H) in 1.7 ml. pyridine, the mixture stirred another 30 min. at 0° and worked up as usual to give 1 g. I [n = 3, X = PO(OH)2]. This yields a Na salt, which is readily soluble in water. Similarly obtained was I [n = 1, X = PO(OH)2] as a water-insol. Ca salt. I (n = 3) show similar properties as vitamin E.
IT 19607-60-4P 22106-63-4P 22106-64-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 19607-60-4 ZCAPLUS
CN 2H-1-Benzopyran-2-tridecanol, 6-(acetyloxy)-3,4-dihydro(-β,κ,ζ,2,5,7,8-heptamethyl)- (CA INDEX NAME)



RN 22106-63-4 ZCAPLUS
CN 2-Chromanpentanol, 6-hydroxy-β,ζ,κ,2,5,7,8-heptamethyl-,

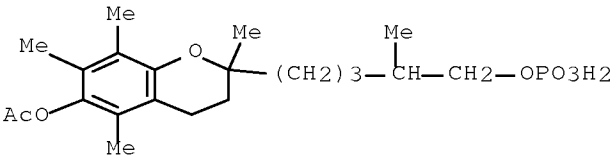
6-acetate α-(dihydrogen phosphate), disodium salt (8CI) (CA INDEX NAME)



●2 Na

RN 22106-64-5 ZCAPLUS

CN 2-Chromanpentanol, 6-hydroxy-β,2,5,7,8-pentamethyl-, 6-acetate α-(dihydrogen phosphate), disodium salt (8CI) (CA INDEX NAME)



●2 Na

L15 ANSWER 35 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1968:467219 ZCAPLUS Full-text

DOCUMENT NUMBER: 69:67219

ORIGINAL REFERENCE NO.: 69:12547a,12550a

TITLE: Manufacturing new chromane derivatives

INVENTOR(S): Blaha, Ludvik; Weichet, Jaroslav; Kakac, Bohumil

SOURCE: Czech., 4 pp.
CODEN: CZXXA9

DOCUMENT TYPE: Patent

LANGUAGE: Czech

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 124781		19671015	CS	19650817

GI For diagram(s), see printed CA Issue.

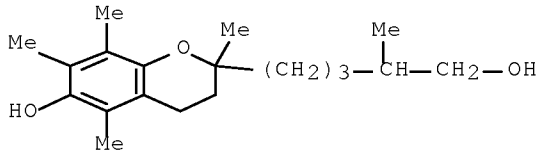
AB Compds. I, derivs. of vitamin E, are obtained by the reaction of II with CH2:CHCMe(OH)(CH2CH2CHMeπCH2OH (III), over acid condensation agents. Thus, a suspension of 6.1 g. II (R = H), 3.5 g. anhydrous ZnCl2, and 0.87 ml. BF3.Et2O in 50 ml. AcOH was treated over 30 min. dropwise with stirring under N with 6.9 g. III (n = 1) in 25 ml. AcOH and the mixture refluxed 4 hrs. at 90° to give 12.8 g. I (n = 1, R = R1 = H), m. 95-8° (Et2O-petroleum ether). On heating with Ac2O in pyridine 2 hrs. at 65° it gave 70% oily I (n = 1, R = R1 = Ac). Similarly, 3.9 g. II (R = Ac), 3 g. ZnCl2, and 3.43 g. III (n = 1) heated in dioxane 2 hrs. at 95-100° gave 3 g. I

(n = 1, R = Ac, R1 = H), b0.01 160-4°, and 1.95 g. II (R = Ac); 3.1 g. III (n = 3), 1.5 g. ZnCl2, and 0.6 ml. BF3Et2O heated 2 hrs. at 100° gave 1.5 g. I (n = 3, R = Ac, R1 = H), b0.001 197-200°.

IT 19414-93-8P 19414-94-9P 19607-59-1P
19607-60-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

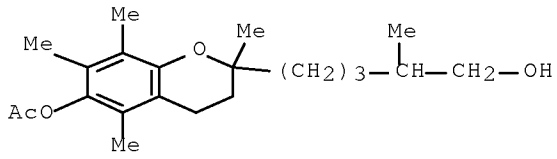
RN 19414-93-8 ZCAPLUS

CN 2H-1-Benzopyran-2-pentanol, 3,4-dihydro-6-hydroxy-β,2,5,7,8-pentamethyl- (CA INDEX NAME)



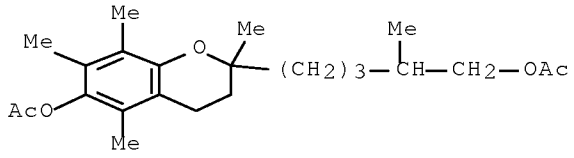
RN 19414-94-9 ZCAPLUS

CN 2H-1-Benzopyran-2-pentanol, 6-(acetyloxy)-3,4-dihydro-β,2,5,7,8-pentamethyl- (CA INDEX NAME)



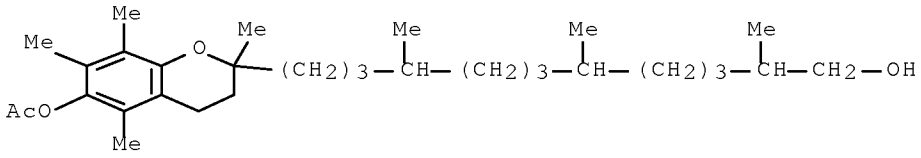
RN 19607-59-1 ZCAPLUS

CN 2H-1-Benzopyran-2-pentanol, 6-(acetyloxy)-3,4-dihydro-β,2,5,7,8-pentamethyl-, 2-acetate (CA INDEX NAME)



RN 19607-60-4 ZCAPLUS

CN 2H-1-Benzopyran-2-tridecanol, 6-(acetyloxy)-3,4-dihydro(-β,κ,ζ,2,5,7,8-heptamethyl)- (CA INDEX NAME)



L15 ANSWER 36 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1968:435947 ZCAPLUS Full-text
DOCUMENT NUMBER: 69:35947
ORIGINAL REFERENCE NO.: 69:6699a,6702a
TITLE: Chroman derivatives
INVENTOR(S): Weichet, Jaroslav; Blaha, Ludvik; Kakac, Bohumil
SOURCE: Czech., 3 pp.
CODEN: CZXXA9
DOCUMENT TYPE: Patent
LANGUAGE: Czech
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 123648		19670715	CS	19650208

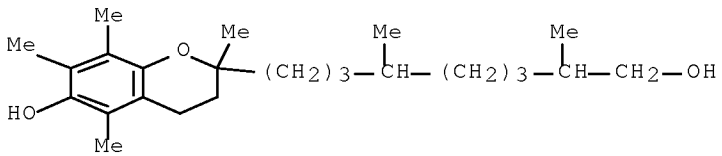
GI For diagram(s), see printed CA Issue.

AB Reduction of I, possibly followed by acylation of the product, gives II, which are useful as antioxidants and show some properties of vitamin E. Thus, 4 g. I (n = 2, R = Ac, R1 = H) in 20 ml. dry Et2O was added dropwise in 45 min. to 1 g. LiAlH4 in 60 ml. Et2O, the mixture refluxed 4 hrs., decomposed with 10% H2SO4, and worked up as usual to give 3.4 g. II (n = 2, R = R1 = H) b0.001 170°, which (1 g.) was kept with 3 ml. Ac2O in 6 ml. pyridine overnight and heated 2 hrs. at 55-60° to yield 1 g. II (n = 2, R = R1 = Ac), b0.001 175°. Similarly, 4 g. I (n = 3, R = Ac, R1 = H) gave 3.6 g. II (n = 3, R = R2 = H), b0.001 207°, yielding II (n = 3, R = R1 = Ac), 80% II (n = 3, R = R1 = stearoyl), m. 29-31° (EtOH), and 93% II [n = 3, R = R1 = CO(CH2)2CO2H]. A solution of 1.6 g. II (n = 1, R = R1 = H) in 15 ml. pyridine was treated at 0° with 5.4 g. stearoyl chloride and the mixture kept at room temperature overnight to give 3.6 g. II (n = 1, R = R1 = stearoyl), m. 37-8°.

IT 18787-09-2
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(biol. activity of)

RN 18787-09-2 ZCAPLUS

CN 2H-1-Benzopyran-2-nonanol, 3,4-dihydro-6-hydroxy-β,ζ,2,5,7,8-hexamethyl- (CA INDEX NAME)

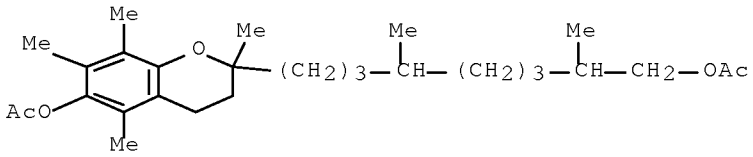


IT 18787-10-5P 18787-11-6P 18787-12-7P
18787-13-8P 18787-14-9P 18787-15-0P
RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)

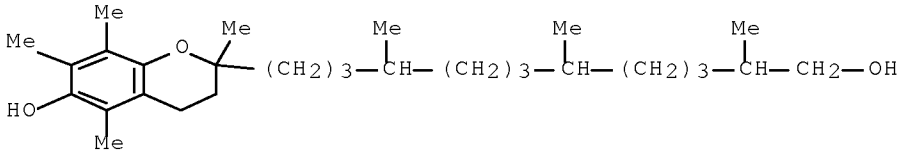
RN 18787-10-5 ZCAPLUS

CN 2H-1-Benzopyran-2-nonanol, 6-(acetyloxy)-3,4-dihydro-β,ζ,2,5,7,8-hexamethyl-, 2-acetate (CA INDEX NAME)



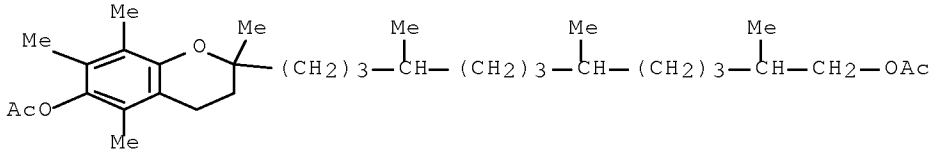
RN 18787-11-6 ZCAPLUS

CN 2H-1-Benzopyran-2-tridecanol, 3,4-dihydro-6-hydroxy(-β,κ,ζ,2,5,7,8-heptamethyl)- (CA INDEX NAME)



RN 18787-12-7 ZCAPLUS

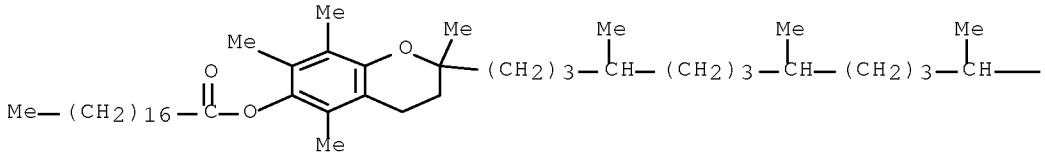
CN 2H-1-Benzopyran-2-tridecanol, 6-(acetyloxy)-3,4-dihydro(-β,κ,ζ,2,5,7,8-heptamethyl)-, 2-acetate (CA INDEX NAME)



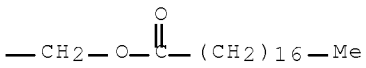
RN 18787-13-8 ZCAPLUS

CN Stearic acid, diester with 6-hydroxy-β,ζ,κ,2,5,7,8-heptamethyl-2-chromantridecanol (8CI) (CA INDEX NAME)

PAGE 1-A

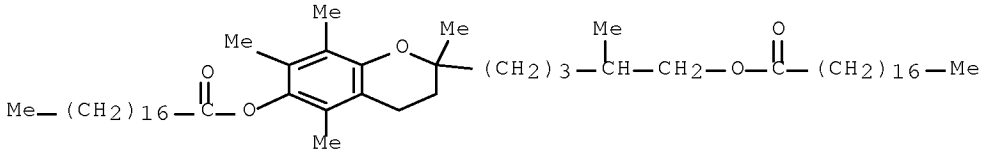


PAGE 1-B



RN 18787-14-9 ZCAPLUS

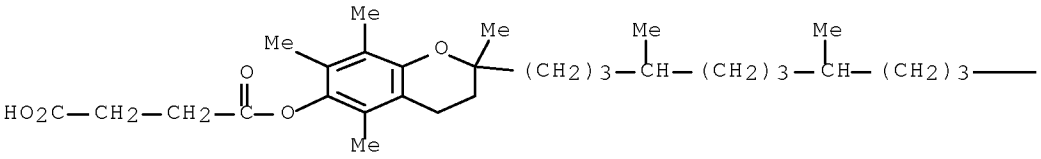
CN Stearic acid, diester with 6-hydroxy-β,2,5,7,8-pentamethyl-2-chromanpentanol (8CI) (CA INDEX NAME)



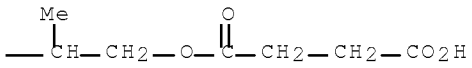
RN 18787-15-0 ZCAPLUS

CN Succinic acid, diester with 6-hydroxy-β,ζ,κ,2,5,7,8-heptamethyl-2-chromantridecanol (8CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L15 ANSWER 37 OF 37 ZCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1967:18647 ZCAPLUS Full-text

DOCUMENT NUMBER: 66:18647

ORIGINAL REFERENCE NO.: 66:3595a

TITLE: Vitamin K and vitamin E series. XVIII. Synthesis of new analogs of vitamin E and their derivatives

AUTHOR(S): Weichet, Jaroslav; Blaha, Ludvik; Kakac, Bohumil

CORPORATE SOURCE: Vyzkumny Ustav Farm. Biochem., Prague, Czech.

SOURCE: Collection of Czechoslovak Chemical Communications (1966), 31(12), 4598-609
CODEN: CCCCAK; ISSN: 0010-0765

DOCUMENT TYPE: Journal

LANGUAGE: German

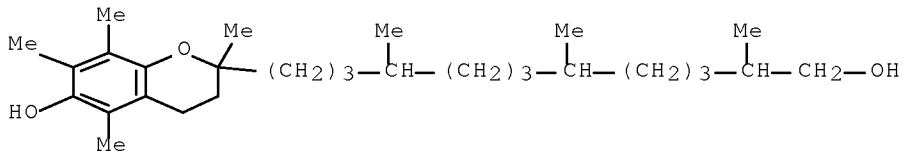
GI For diagram(s), see printed CA Issue.

AB cf. CA 65, 13771d. New analogs of (±)-α-tocopherol and its lower isoprene analogs were prepared containing a CH2OH group instead of the terminal Me group in the side chain. Reduction of 2,5,7,8-tetramethyl-2-(4,8,12-trimethyl-12-carboxydodecyl)-6-acetoxychroman with LiAlH4 in refluxing Et2O gave 98.5% I, b0.001 207°; diacetate, b0.001 198°. Analogously were prepared II, b0.001 170° (diacetate b0.001 175°), and III, m. 95-8° (1:1 Et2O-petroleum ether); diacetate (IV) b0.08 175°. IV was obtained also by reaction of 6.1 g. 2,5,6-trimethylhydroquinone (V), 3.5 g. anhydrous ZnCl2, 0.87 ml. BF3.Et2O, and 50 ml. AcOH with 6.9 g. H2C:CHCM2(OH)(CH2)3CHM2CH2OH (VI) in 25 ml. AcOH and acetylation with Ac2O in C5H5N. A mixture of 11.1 g. V diacetate, 100 ml. MeOH, and 5.39 ml. 26% aqueous NH3 was briefly refluxed, kept under N at room temperature overnight, evaporated, and the residue diluted with 50 ml. H2O to give 8.3 g. V 1-monoacetate (VII), m. 104-6° (1:1 C6H6-cyclohexane). A stirred mixture of 1.95 g. VII, 1.5 g. anhydrous ZnCl2, 0.6 ml. BF3.Et2O, and 6 ml. dry dioxane was added dropwise over 20 min. to 3.1 g. H2C:CHCMe(OH)(CH2CH2CH2CHMe)3CH2OH in 6 ml. dioxane, and the whole heated 2 hrs. at 100° to give 1.5 g. VIII, b0.001 197-200°. Analogous condensation of VI and VII gave 43% IX, b0.01 160-4°. Treatment of VIII or IX with POCl3 in C5H5N gave the corresponding phosphates which were isolated as di-Na salts. A solution of 2 g. VIII in 10 ml. C5H5N was treated at 0° with 1.1 g. p-MeC6H4SO2Cl, the whole kept at room temperature overnight, decomposed with 100 ml. iced H2O, and extracted with Et2O to give 95% VIII p-toluenesulfonate (X). Similarly was prepared IX p-toluenesulfonate (XI). A solution of 2.8 g. XI in 5 ml. Me2CO was kept with 1 g. NaI in 10 ml. Me2CO 3 hrs. at room temperature and the mixture refluxed 2 hrs. to give 2.5 g. 2,5,7,8-tetramethyl-2-(4-methyl-5-iodopentyl)-6- acetoxychroman (XII), b0.001 164-5°, containing .apprx.10% the dehydroiodination product. Reduction of 1.9 g. crude XII with 1.5 g. LiAlH4 in refluxing Et2O gave 1.1 g. crude 2,5,7,8-tetramethyl-2-(4-methylpentyl)-6-hydroxychroman; acetate b0.001 120-2°. Reduction of X with LiAlH4 gave 96.5% (±)-α-tocopherol; acetate b0.01 175°. A stirred solution of 4.34 g. Ce(SO4)2 in 60 ml. H2O and 1.5 ml. concentrated H2SO4 was treated over 5 min. with 2 g. I in 90 ml. MeOH and the whole stirred 15 min. to give 2 g. 2,5,6-trimethyl-3-(3,7,11,15-tetramethyl-3,16-dihydroxyhexadecyl)- benzoquinone. Similarly, III gave 2,5,6-trimethyl-3-(3,7-dimethyl-3,8-dihydroxyoctyl)benzoquinone (XIII), b0.001 170°. A solution of 1 g. XIII in 10 ml. Ac2O, 3 ml. AcOH, and 20 ml. C5H5N was treated portionwise over 30 min. with 1.5 g. powdered Zn and the whole refluxed 15 min. to give 1.3 g. 2,5,6-trimethyl-3-(3,7-dimethyl-3-hydroxy-8-acetoxyoctyl)hydroquinone diacetate, b0.001 185-8°.

IT 18787-11-6P 18787-12-7P 19607-60-4P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and spectrum of)

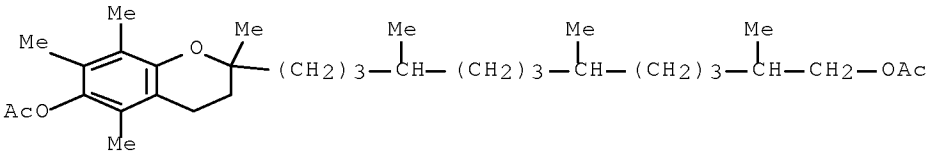
RN 18787-11-6 ZCAPLUS

CN 2H-1-Benzopyran-2-tridecanol, 3,4-dihydro-6-hydroxy(-β,κ,ζ,2,5,7,8-heptamethyl)- (CA INDEX NAME)

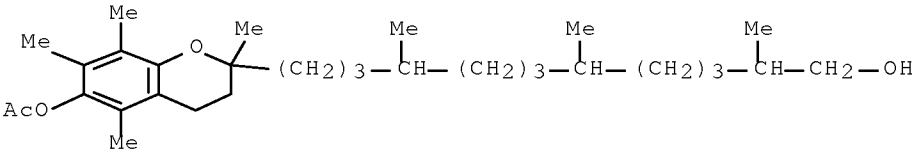


RN 18787-12-7 ZCAPLUS

CN 2H-1-Benzopyran-2-tridecanol, 6-(acetyloxy)-3,4-dihydro(-β,κ,ζ,2,5,7,8-heptamethyl)-, 2-acetate (CA INDEX NAME)

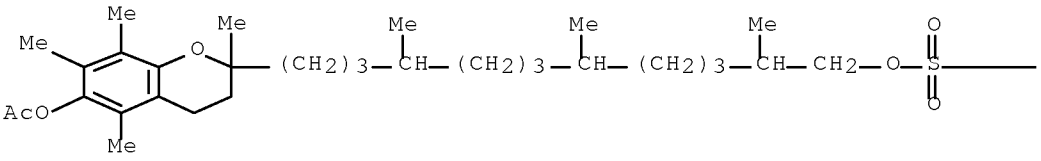


RN 19607-60-4 ZCAPLUS
CN 2H-1-Benzopyran-2-tridecanol, 6-(acetyloxy)-3,4-dihydro(-β,κ,ζ,2,5,7,8-heptamethyl)- (CA INDEX NAME)

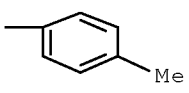


IT 13178-80-8P 14211-61-1P 18787-09-2P
18787-10-5P 19414-93-8P 19414-94-9P
19607-59-1P 22106-63-4P 22106-64-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 13178-80-8 ZCAPLUS
CN 2H-1-Benzopyran-2-tridecanol, 6-(acetyloxy)-3,4-dihydro(-β,κ,ζ,2,5,7,8-heptamethyl)-, 2-(4-methylbenzenesulfonate) (CA INDEX NAME)

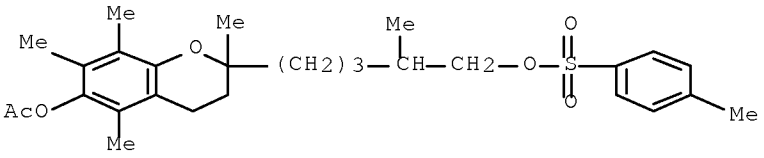
PAGE 1-A



PAGE 1-B

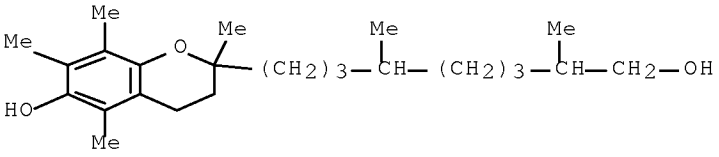


RN 14211-61-1 ZCAPLUS
CN 2H-1-Benzopyran-2-pentanol, 6-(acetyloxy)-3,4-dihydro-β,2,5,7,8-pentamethyl-, 2-(4-methylbenzenesulfonate) (CA INDEX NAME)



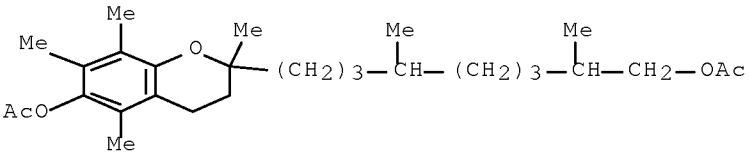
RN 18787-09-2 ZCAPLUS

CN 2H-1-Benzopyran-2-nonanol, 3,4-dihydro-6-hydroxy-β,ζ,2,5,7,8-hexamethyl- (CA INDEX NAME)



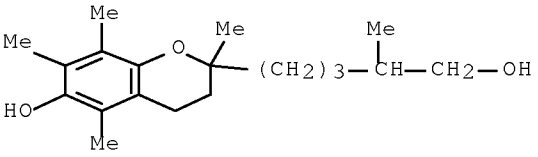
RN 18787-10-5 ZCAPLUS

CN 2H-1-Benzopyran-2-nonanol, 6-(acetyloxy)-3,4-dihydro-β,ζ,2,5,7,8-hexamethyl-, 2-acetate (CA INDEX NAME)



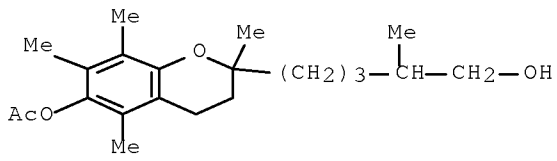
RN 19414-93-8 ZCAPLUS

CN 2H-1-Benzopyran-2-pentanol, 3,4-dihydro-6-hydroxy-β,2,5,7,8-pentamethyl- (CA INDEX NAME)



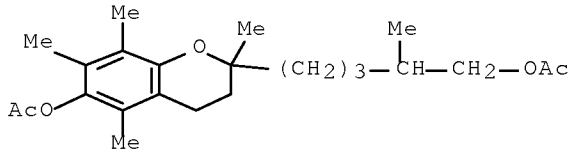
RN 19414-94-9 ZCAPLUS

CN 2H-1-Benzopyran-2-pentanol, 6-(acetyloxy)-3,4-dihydro-β,2,5,7,8-pentamethyl- (CA INDEX NAME)



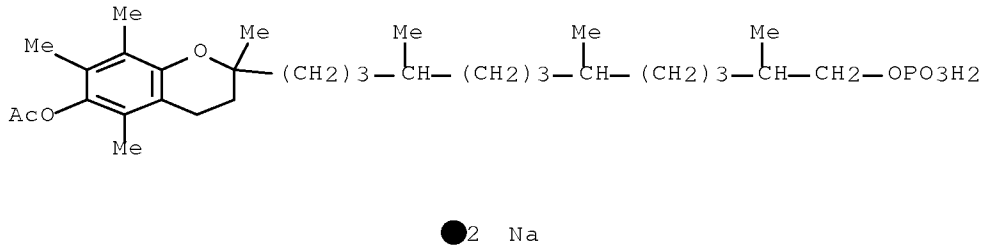
RN 19607-59-1 ZCAPLUS

CN 2H-1-Benzopyran-2-pentanol, 6-(acetyloxy)-3,4-dihydro-β,2,5,7,8-pentamethyl-, 2-acetate (CA INDEX NAME)



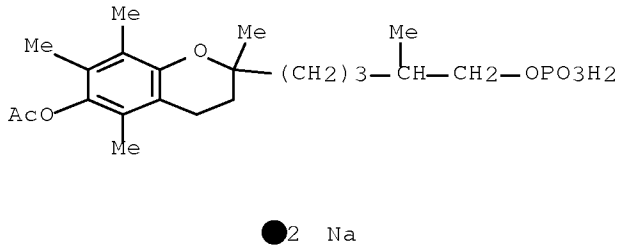
RN 22106-63-4 ZCAPLUS

CN 2-Chromanpentanol, 6-hydroxy-β,ζ,κ,2,5,7,8-heptamethyl-, 6-acetate α-(dihydrogen phosphate), disodium salt (8CI) (CA INDEX NAME)



RN 22106-64-5 ZCAPLUS

CN 2-Chromanpentanol, 6-hydroxy-β,2,5,7,8-pentamethyl-, 6-acetate α-(dihydrogen phosphate), disodium salt (8CI) (CA INDEX NAME)



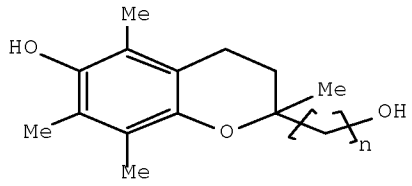
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

```
=> FILE ZCAPLUS
FILE 'ZCAPLUS' ENTERED AT 11:45:44 ON 16 OCT 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)
```



```
FILE COVERS 1907 - 16 Oct 2009  VOL 151 ISS 17
FILE LAST UPDATED: 15 Oct 2009  (20091015/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED:  Aug 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE:  Aug 2009

ZCAplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2009.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> D STAT QUE L20
L16         193 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  LUU B?/AU
L17          18 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  HEUSCHLING P?/AU
L18        1467 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  MULLER T?/AU
L19           9 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  MORGA E?/AU
L20           1 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L16 AND L17 AND L18
                AND L19


=> D L20 IBIB ABS HITSTR 1

L20  ANSWER 1 OF 1  ZCAPLUS  COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:         2004:967772  ZCAPLUS  Full-text
DOCUMENT NUMBER:          142:134746
TITLE:                    Tocopherol long chain fatty alcohols decrease the
                          production of TNF-α and NO radicals by activated
                          microglial cells
AUTHOR(S):                Muller, Thierry; Grandbarbe, Luc;
                          Morga, Eleonora; Heuschling, Paul;
                          Luu, Bang
CORPORATE SOURCE:         Laboratoire de chimie organique des substances
                          naturelles, Centre de Neurochimie, UMR 7123 CNRS,
                          Universite Louis Pasteur, Strasbourg, 67084, Fr.
SOURCE:                   Bioorganic & Medicinal Chemistry Letters (2004),
                          14(24), 6023-6026
                          CODEN: BMCLE8; ISSN: 0960-894X
```

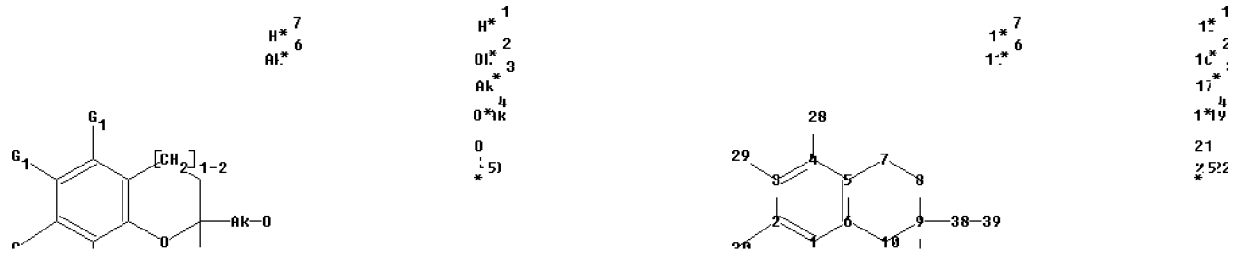
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 142:134746
GI



I

AB The synthesis of a series of tocopherol long chain Fatty Alcs. (TFA) I (n = 10,12,14,16) and their biol. activities on the modulation of microglial activation are described. Specifically, the 2-(12-hydroxy-dodecyl)-2,5,7,8-tetramethyl-chroman-6-ol, the TFA bearing 12 carbon atoms on the side chain (n = 12), shows the most potent inhibition of secretion on nitric oxide (NO) and tumor necrosis factor-α (TNF-α) by lipopolysaccharide (LPS)-activated microglia.
OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
     FILE 'REGISTRY' ENTERED AT 08:57:13 ON 16 OCT 2009
                ACT CHOREG933L3/A
               ---------
L1               STR
L2           5131 SEA SSS FUL L1
                 ---------
L3               STRUCTURE UPLOADED
                 D
L4              8 SEA SUB=L2 SSS SAM L3
                 D SCAN
L5           281 SEA SUB=L2 SSS FUL L3

     FILE 'ZCAPLUS' ENTERED AT 09:53:21 ON 16 OCT 2009
L6           101 SEA SPE=ON  ABB=ON  PLU=ON  L5

     FILE 'REGISTRY' ENTERED AT 10:27:20 ON 16 OCT 2009
L7               STRUCTURE UPLOADED
                 D
L8              0 SEA SSS SAM L7
L9              4 SEA SUB=L2 SSS SAM L7
L10          133 SEA SUB=L2 SSS FUL L7

     FILE 'ZCAPLUS' ENTERED AT 10:45:12 ON 16 OCT 2009
L11           59 SEA SPE=ON  ABB=ON  PLU=ON  L10

     FILE 'REGISTRY' ENTERED AT 10:45:26 ON 16 OCT 2009
L12              STRUCTURE UPLOADED
                 D
L13             2 SEA SUB=L2 SSS SAM L12
                 D SCAN
L14           91 SEA SUB=L2 SSS FUL L12

     FILE 'ZCAPLUS' ENTERED AT 10:58:58 ON 16 OCT 2009
L15           37 SEA SPE=ON  ABB=ON  PLU=ON  L14
L16          193 SEA SPE=ON  ABB=ON  PLU=ON  LUU B?/AU
L17           18 SEA SPE=ON  ABB=ON  PLU=ON  HEUSCHLING P?/AU
L18         1467 SEA SPE=ON  ABB=ON  PLU=ON  MULLER T?/AU
L19            9 SEA SPE=ON  ABB=ON  PLU=ON  MORGA E?/AU
L20            1 SEA SPE=ON  ABB=ON  PLU=ON  L16 AND L17 AND L18 AND L19

     FILE 'REGISTRY' ENTERED AT 11:40:19 ON 16 OCT 2009

     FILE 'ZCAPLUS' ENTERED AT 11:40:23 ON 16 OCT 2009
                 D STAT QUE L15
                 D L15 IBIB ABS HITSTR 1-37

     FILE 'ZCAPLUS' ENTERED AT 11:45:44 ON 16 OCT 2009
                 D STAT QUE L20
                 D L20 IBIB ABS HITSTR 1



=>

Uploading 1LA.str
```



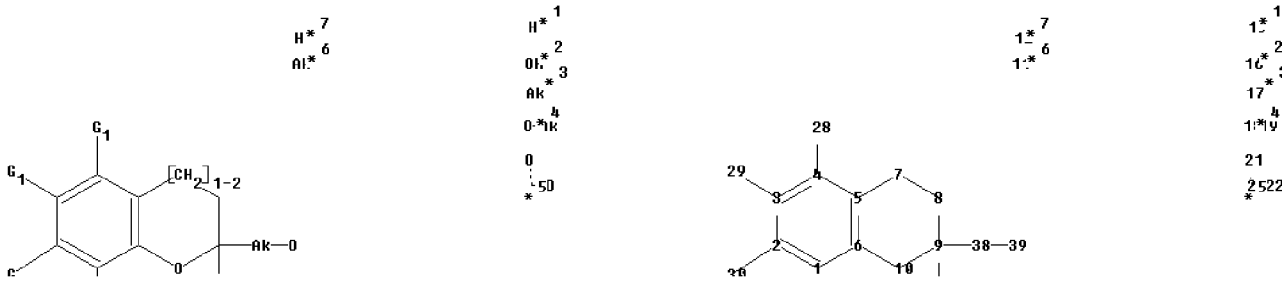
chain nodes :
11 12 15 16 17 18 19 20 21 22 28 29 30 31 32 38 39
ring nodes :
1 2 3 4 5 6 7 8 9 10
chain bonds :
1-31 2-30 3-29 4-28 9-32 9-38 18-19 20-21 20-22 38-39
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 8-9 9-10
exact/norm bonds :
1-31 2-30 3-29 4-28 5-6 5-7 6-10 7-8 8-9 9-10 9-32 9-38 18-19 20-21
20-22 38-39
normalized bonds :
1-2 1-6 2-3 3-4 4-5

G1:[*1],[*2],[*3],[*4],[*5]

G2:[*6],[*7]

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:CLASS 12:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS 21:CLASS
22:CLASS
28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS 38:CLASS 39:CLASS

Uploading 12LA.str



chain nodes :
11 12 15 16 17 18 19 20 21 22 28 29 30 31 32 38 39
ring nodes :
1 2 3 4 5 6 7 8 9 10
chain bonds :
1-31 2-30 3-29 4-28 9-32 9-38 18-19 20-21 20-22 38-39
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 8-9 9-10
exact/norm bonds :
1-31 2-30 3-29 4-28 5-6 5-7 6-10 7-8 8-9 9-10 9-32 9-38 18-19 20-21
20-22
exact bonds :
38-39
normalized bonds :
1-2 1-6 2-3 3-4 4-5

G1:[*1],[*2],[*3],[*4],[*5]

G2:[*6],[*7]

Connectivity :
38:2 E exact RC ring/chain
Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:CLASS 12:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS 21:CLASS
22:CLASS
28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS 38:CLASS 39:CLASS
Generic attributes :
38:
Saturation : Saturated

Element Count :
Node 38: Limited
C,C6